

PROCEEDINGS of the California Academy of Sciences (Series 4)

September 28, 2018 * Volume 65 * Supplement II

Institute for Biodiversity Science & Sustainability



Copyright © 2018 by the California Academy of Sciences

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage or retrieval system, without permission in writing from the publisher.

SCIENTIFIC PUBLICATIONS

Publisher: Shannon Bennett, Ph.D.
Chief of Science and Research Collections
California Academy of Sciences

EDITORIAL BOARD

Alan E. Leviton, Ph.D., *Editor*
Katherine Piatek, M.A., *Managing Editor*
Michael T. Ghiselin, Ph.D., *Associate Editor*
Tomio Iwamoto, Ph.D., *Associate Editor*
Gary C. Williams, Ph.D., *Associate Editor & Website Coordinator*

COVER IMAGES

Front cover: *Python anchietae* from Omahua, Namibe Province, Angola.
Photo by Luis M.P. Ceriaco

COVER DESIGN

Gary C. Williams & Alan E. Leviton
California Academy of Sciences

ISSN 0068-547X

The Proceedings of the California Academy of Sciences is an international journal that accepts manuscripts for publication in the Natural Sciences and selected areas in the Earth Sciences, such as biostratigraphy, regional and global tectonics as they relate to biogeography, and paleoclimatology, and topics in astrobiology, anthropology, as well as the history of science as they relate to institutions of natural history, to individuals, and to activities, such as expeditions and explorations, in the natural sciences.

All manuscripts submitted for publication in any of the Academy's scientific publication series (*Proceedings*, *Occasional Papers*, *Memoirs*) are subject to peer review. Peer review includes both internal and external review, internal review by at least one Academy scientist whose interests parallel those of the submission, and external review, ordinarily by two individuals who are recognized scholars in the field.

Manuscripts accepted for publication are subject to page charges; charges may be waived on a case-by-case basis.

Published by the California Academy of Sciences
55 Music Concourse Drive, Golden Gate Park,
San Francisco, California 94118 U.S.A.

Printed in the United States of America by
Allen Press Inc., Lawrence, Kansas 66044

Series 4, Volume 65, Supplement II, pp. 1–501, 413 figs., 5 tables, Appendix. September 28, 2018

Diversity and Distribution of the Amphibians and Terrestrial Reptiles of Angola Atlas of Historical and Bibliographic Records (1840–2017)

Mariana P. Marques ^{1,2*}, **Luis M. P. Ceríaco** ^{2,3}, **David C. Blackburn** ^{4,5},
and **Aaron M. Bauer** ^{3,5}

¹ *Centro de Investigação em Biodiversidade e Recursos Genéticos (CIBIO), INBIO, Universidade do Porto, Rua Padre Armando Quintas 7, Vairão, 4485-661 Porto, Portugal.* ² *Departamento de Zoologia e Antropologia (Museu Bocage), Museu Nacional de História Natural e da Ciência, Universidade de Lisboa, Rua da Escola Politécnica 58, 1269–102 Lisboa, Portugal.* ³ *Department of Biology, Villanova University, 800 Lancaster Avenue, Villanova, Pennsylvania 19085, USA.* ⁴ *Department of Natural History, Florida Museum of Natural History, University of Florida, Gainesville, Florida 32611, USA.* ⁵ *Research Associate, California Academy of Sciences, 55 Music Concourse Drive, San Francisco, California, 94118, USA.*

FOREWORD (English version)

The rich and distinctive Angolan herpetofauna has engendered the interest of countless scholars around the world. Angola's unique geographic location, at the intersection of the central and southern regions of the African continent, has given it two discrete faunas of amphibians and reptiles. Of different colors, sizes, forms, and behaviors, these species have, over the years, enticed biologists, explorers and scientists to boldly and selflessly dedicate themselves to their study.

The interest shown by specialists in the study of Angolan specimens dates back more than one hundred years. Since the nineteenth century, books and papers have been published on the topic as the result of these investigations. The first major bibliographic reference about the Angolan herpetofauna, *Herpétologie d'Angola et du Congo* by José Vicente Barbosa du Bocage, dates from 1895. Many researchers and publications followed, greatly enriching the scientific bibliography on the topic. However, the scattered nature of the published works, as well as the dearth of available specimens from earlier times, has made it difficult for researchers, scholars or curious amateurs to access to this information. Because of these difficulties, and to facilitate the access to available data on the Angolan herpetofauna, the Ministry of Environment, through its National Institute of Biodiversity and Conservation Areas, decided to present, in a single volume, all the available scientific records published so far on the diversity of amphibians and reptiles. Such a task, which has its basis in the National Strategy and Action Plan for Biodiversity and Conservation Areas of Angola, was dependent upon the helpful collaboration of important international partners.

The present Atlas will be of inestimable assistance to the study of the Natural History of Angola, not only because of its standardized taxonomic and geographical accounts with distribution maps for all of the amphibians and reptiles known in Angola, but also because of its competent approach to the physiography, climate, biomes, historical herpetological research in Angola, conservation, and other topics. The thoughtful way the book is arranged, with straightforward text, clear tables and interesting figures, makes it easy for even laymen to read and understand.

At 501 pages long, profusely documented and richly illustrated, this Atlas provides a grand

guided tour through the diversity of the Angolan herpetofauna, from the most remote and spectacular places of the country. Through mountains and escarpments, plains and valleys, savannas and dense forests, rivers and streams, lakes and lagoons, this work encompasses the entire country, aking us on an enlightening tour of knowledge.

The methodical labor and persistence of the specialists who produced the present work, ensure that it not only contributes to scientific history, through its compilation of research already completed, but also suggests future directions for researchers and scholars devoted to the topic. Further, this substantial volume will also inform the national authorities with respect to environment protection and conservation policies.

Given all this, one can see that the present work, reflecting the contributions of the men and women who created it, is destined to become a standard reference to the scientific literature of the country, especially in regard to this part of its fauna. The quality of the scientific information poured into the following pages certainly qualifies the authors of this accurate work as leading herpetologists and places them among the important researchers to have served Angola in the course of its scientific history.

(Portuguese version)

A riqueza e as características da herpetofauna angolana, despertaram e continuam a despertar, o interesse de inúmeros estudiosos em todo o Mundo. A privilegiada localização geográfica que coloca Angola nas regiões central e meridional do continente africano faz do país um caso raro, ao acolher no seu regaço animais de dois espaços diferentes do continente africano, beneficiando por isso de uma deslumbrante variedade de reptéis e anfíbios, como poucos países. De cores, tamanhos, formatos e comportamentos diferentes, esses espécimes levaram a que biólogos, exploradores e cientistas se debruçassem sobre o seu estudo, de modo denodadamente abnegado e por longo tempo.

O interesse manifestado por especialistas no estudo de espécimes angolanos vem de há mais de uma centena de anos. Assim, em resultado dessas investigações, desde o século XIX são publicados livros e opúsculos sobre o assunto. A primeira grande referência bibliográfica relativa à herpetofauna angolana data de 1895 e intitula-se Herpétologie d'Angola et du Congo, da autoria de José Vicente Barbosa du Bocage. Seguiram-se-lhes vários investigadores e obras que enriqueceram sobremaneira a bibliografia científica sobre o assunto, ao longo de mais de um século.

A natureza esparsa das obras publicadas sobre o tema, assim como a exiguidade de exemplares de tempos de antanho disponíveis tornam de certo modo difícil o acesso a um conjunto de informações por parte de investigadores, estudiosos ou simples curiosos. Em razão desses escolhos e para facilitar o contacto com os elementos informativos já existentes sobre a herpetofauna angolana, o Ministério do Ambiente, através do seu Instituto Nacional da Biodiversidade e Áreas de Conservação, decidiu coligir num único volume todos os dados científicos até agora publicados e disponíveis sobre a diversidade de reptéis e anfíbios. Para tamanha empreitada, que encontra estribo na Estratégia e Plano de Ação Nacional para a Biodiversidade e Áreas de Conservação de Angola, socorreu-se da prestimosa colaboração científica de importantes parceiros internacionais.

O presente Atlas representa um inestimável auxílio para o estudo da História Natural de Angola não só devido à metódica sectorização temática em que se destaca a apresentação de fichas taxonómicas e geográficas com mapas de ocorrência para todos os anfíbios e reptéis conhecidos em Angola, mas também pela habilitada abordagem da fisiografia, do clima, dos biomas, da investigação histórica da herpetofauna angolana, da conservação, entre outros. Não será despiendo referir que o modo cuidadoso como foi configurado o livro, com textos arejados, quadros

claros e gravuras interessantes, mostra a inequívoca facilidade de leitura e compreensão sobre a matéria ate mesmo para um leigo.

Através destas quase 500 páginas, profusamente documentadas com dados numéricos e ricamente ilustradas, o Atlas proporciona-nos uma arrebatante visita guiada pela diversidade da herpetofauna angolana, levando-nos aos mais recônditos e inimagináveis cantos do país. Por entre montanhas e escarpas, planícies e vales, savanas e densas florestas, rios e riachos, lagos e lagoas, a obra perpassa o país de lés-a-lés, transportando-nos num enleante tour de conhecimento.

O labor metódico e a sagacidade dos especialistas que produziram a presente obra fazem com que a mesma cumpra com primores de requinte a dupla função utilitária de fazer história científica, através da apresentação de diversas obras de investigação aqui elencadas, e indicar caminhos para pesquisadores e estudiosos da matéria interessados, tal é forte a sua componente documental que vem cobrir uma grande lacuna há muito existente. Este nutrido volume tem ainda o condão de facilitar as autoridades para a concepção de políticas de Proteção e Conservação Ambiental.

Por tudo isso, é fácil inferir que a presente obra, na qual luzem intensamente as prendas dos homens e mulheres que a corporizaram, dispõe dos necessários condimentos para ser uma referência na literatura científica do país, mormente no que diz respeito a este importante segmento da sua fauna. A qualidade da informação científica vertida ao longo das páginas que se seguem eleva certamente os autores deste apurado trabalho à condição de obreiros de primeira grandeza no plano da Herpetologia, sendo pressentível que não muito tarde no tempo enfileirar-se-ão, seguramente, sem desdouro ao lado dos mais sonantes nomes que configuram o escol dos grandes investigadores que serviram Angola ao longo da sua história científica.

Her Excellency

Minister of the Environment of the Republic of Angola

Sua Excelência

Ministra do Ambiente da República de Angola



Paula Cristina Francisco Coelho

Luanda, April 2018

Luanda, Abril 2018



J. V. B. du Bocage

**In honor of José Vicente Barbosa du Bocage (1823–1907),
forefather of Angolan herpetology**

TABLE OF CONTENTS

Foreword 1

Abstract 9

Introduction 9

The Angolan landscape 11

 Political and administrative borders of Angola. 11

 Physiography 12

 River Basins 13

 Geology 14

 Climate 14

 Biomes and vegetation zones 14

History of herpetological research in Angola 23

Diversity, Distribution and Endemism 37

Conservation 48

Materials and Methods 55

 Data 55

 Mapping species occurrence 55

 Account standardization 56

 Abbreviations and Acronyms 56

Taxonomic accounts 59

 Amphibia 59

 Order Anura 59

 Family Pipidae 59

 Genus *Xenopus* 59

 Family Bufonidae 66

 Genus *Mertensophryne* 75

 Genus *Poyntonophrynus* 76

 Genus *Schismaderma* 78

 Genus *Sclerophrys* 66

 Family Microhylidae 79

 Genus *Phrynomantis* 79

 Family Brevicipitidae 81

 Genus *Breviceps* 81

 Family Hemisotidae 83

 Genus *Hemisus* 83

 Family Hyperoliidae 85

 Genus *Afrixalus* 85

 Genus *Cryptothylax* 88

 Genus *Hyperolius* 89

 Genus *Kassina* 116

 Family Arthroleptidae 118

 Genus *Arthroleptis* 118

 Genus *Leptopelis* 121

 Genus *Trichobatrachus* 127

 Family Ptychadenidae 128

 Genus *Ptychadena* 128

 Genus *Hildebrandtia* 142

 Family Phrynobatrachidae 144

 Genus *Phrynobatrachus* 144

 Family Pyxicephalidae 149

 Genus *Amietia* 149

Genus <i>Aubria</i>	151
Genus <i>Pyxicephalus</i>	152
Genus <i>Tomopterna</i>	153
Family Dicroglossidae	157
Genus <i>Hoplobatrachus</i>	157
Family Ranidae	158
Genus <i>Amnirana</i>	158
Family Rhacophoridae	162
Genus <i>Chiromantis</i>	162
Reptilia	162
Order Chelonii	162
Family Pelomedusidae	162
Genus <i>Pelomedusa</i>	162
Genus <i>Pelusios</i>	164
Family Testudinidae	169
Genus <i>Kinixys</i>	169
Genus <i>Stigmochelys</i>	172
Family Trionychidae	173
Genus <i>Cycloderma</i>	173
Genus <i>Trionyx</i>	173
Order Crocodylia	174
Family Crocodylidae	174
Genus <i>Crocodylus</i>	174
Genus <i>Mecistops</i>	176
Genus <i>Osteolaemus</i>	176
Order Squamata	177
(Lizards)	177
Family Gekkonidae	177
Genus <i>Afroedura</i>	177
Genus <i>Afrogecko</i>	178
Genus <i>Chondrodactylus</i>	179
Genus <i>Hemidactylus</i>	182
Genus <i>Kolekanos</i>	188
Genus <i>Lygodactylus</i>	188
Genus <i>Pachydactylus</i>	192
Genus <i>Rhoptropus</i>	199
Family Amphisbaenidae	205
Genus <i>Dalophia</i>	205
Genus <i>Monopeltis</i>	207
Genus <i>Zygaspis</i>	211
Family Lacertidae	213
Genus <i>Heliobolus</i>	213
Genus <i>Holaspis</i>	214
Genus <i>Ichnotropis</i>	214
Genus <i>Meroles</i>	218
Genus <i>Nucras</i>	221
Genus <i>Pedioplanis</i>	222
Family Cordylidae	225
Genus <i>Chamaesaura</i>	225
Genus <i>Cordylus</i>	227
Family Gerrhosauridae	229
Genus <i>Cordylosaurus</i>	229

Genus <i>Gerrhosaurus</i>	230
Genus <i>Matobosaurus</i>	235
Genus <i>Tetradactylus</i>	236
Family Scincidae	237
Genus <i>Acontias</i>	237
Genus <i>Eumecia</i>	239
Genus <i>Feylinia</i>	240
Genus <i>Lepidothyris</i>	242
Genus <i>Leptosiaphos</i>	243
Genus <i>Lubuya</i>	244
Genus <i>Melanoseps</i>	245
Genus <i>Mochlus</i>	245
Genus <i>Panaspis</i>	247
Genus <i>Sepsina</i>	250
Genus <i>Trachylepis</i>	252
Genus <i>Typhlacontias</i>	272
Family Varanidae	275
Genus <i>Varanus</i>	275
Family Chamaeleonidae	279
Genus <i>Chamaeleo</i>	279
Genus <i>Trioceros</i>	283
Family Agamidae	284
Genus <i>Acanthocercus</i>	284
Genus <i>Agama</i>	287
Serpentes	292
Family Typhlopidae	292
Genus <i>Afrotyphlops</i>	292
Genus <i>Letheobia</i>	299
Family Leptotyphlopidae	299
Genus <i>Leptotyphlops</i>	299
Genus <i>Namibiana</i>	301
Family Pythonidae	304
Genus <i>Python</i>	304
Family Boidae	307
Genus <i>Calabaria</i>	307
Family Viperidae	308
Genus <i>Atheris</i>	308
Genus <i>Bitis</i>	309
Genus <i>Causus</i>	315
Family Lamprophiidae	320
Genus <i>Amblyodipsas</i>	320
Genus <i>Aparallactus</i>	321
Genus <i>Atractaspis</i>	323
Genus <i>Boaedon</i>	327
Genus <i>Bothrophthalmus</i>	331
Genus <i>Dromophis</i>	332
Genus <i>Gonionotophis</i>	332
Genus <i>Hemirhagerrhis</i>	333
Genus <i>Hypoptophis</i>	334
Genus <i>Limaformosa</i>	335
Genus <i>Lycophidion</i>	338
Genus <i>Mehelya</i>	340

Genus <i>Polemon</i>	341
Genus <i>Prosymna</i>	342
Genus <i>Psammophis</i>	345
Genus <i>Psammophylax</i>	354
Genus <i>Pseudaspis</i>	357
Genus <i>Pythonodipsas</i>	358
Genus <i>Xenocalamus</i>	359
Family Elapidae	361
Genus <i>Aspidelaps</i>	361
Genus <i>Dendroaspis</i>	362
Genus <i>Elapsoidea</i>	365
Genus <i>Naja</i>	368
Genus <i>Pseudohaje</i>	376
Family Colubridae	376
Genus <i>Chamaelycus</i>	376
Genus <i>Crotaphopeltis</i>	377
Genus <i>Dasyeltis</i>	379
Genus <i>Dipsadoboa</i>	381
Genus <i>Dispholidus</i>	381
Genus <i>Grayia</i>	384
Genus <i>Hapsidophrys</i>	387
Genus <i>Hormonotus</i>	387
Genus <i>Lycodonomorphus</i>	388
Genus <i>Mopaneveldophis</i>	389
Genus <i>Philothamnus</i>	389
Genus <i>Rhamnophis</i>	398
Genus <i>Scaphiophis</i>	399
Genus <i>Telescopus</i>	400
Genus <i>Thelotornis</i>	401
Genus <i>Thrasops</i>	403
Genus <i>Toxicodryas</i>	405
Family Natricidae	406
Genus <i>Limnophis</i>	406
Genus <i>Natriciteres</i>	408
Acknowledgments	410
Literature Cited	412
Addendum	456
Appendix	457
Taxonomic Index	481

ABSTRACT

The present work constitutes an historical atlas of all known bibliographic records of amphibians and reptiles of Angola. It is the first attempt to compile in a single document all the records scattered through hundreds of publications, published from the first half of the nineteenth century to the present day, and provide a critical taxonomic revision of the herpetofauna of the country. An introductory text discusses the Angolan socio-political and physiographic landscape, the history of herpetological research in the country, and the diversity, distribution and endemism of Angolan herpetofauna. It also provides a summary of the conservation concerns surrounding the herpetological fauna. For each taxon noted in the literature we provide a detailed taxonomic account, including data on the original description, its IUCN assessment status, global distribution, georeferenced records for each known occurrence in Angola (accompanied by a point locality map), and taxonomic and distributional notes. A synoptic list of all documented Angolan amphibian and reptile species is provided as are lists of taxa previously erroneously assigned to the Angolan fauna. We recognize 117 species of frogs and 278 species of reptiles as occurring in Angola, although many of these represent species complexes or are currently recognized under names of convenience pending taxonomic evaluation. In one instance we provide a replacement name, *Trachylepis monardi* nom. nov., to deal with an instance of secondary homonymy. The Atlas is intended to be a working reference for both current research and conservation planning, as well as a catalyst for future work.

RESUMO

O presente trabalho constitui um atlas histórico referente a todos os registos bibliográficos de anfíbios e répteis de Angola. Apresenta-se assim como um primeira tentativa de compilar num único documento todos os registos dispersos por entre centenas de publicações, desde a primeira metade do século XIX até ao presente, e providencia uma revisão taxonómica crítica da herpetofauna do país. Este atlas contém textos introdutórios sobre Angola, englobando a paisagem sócio-política e fisiográfica Angolana, a história da investigação herpetológica no país, a diversidade, distribuição e endemismo da herpetofauna Angolana, bem como uma revisão dos problemas de conservação que afectam a fauna herpetológica nacional. Para cada taxa cuja ocorrência está confirmada, são apresentadas fichas taxonómicas detalhadas, passando em revista desde os dados referentes à descrição original do taxa, a sua classificação de acordo com a IUCN, a distribuição global, uma detalhada e georeferenciada lista de todos os registos para Angola – todos eles mapeados num mapa inteiramente dedicado, bem como notas taxonómicas e de distribuição. O apêndice contém listas sinóticas sobre todas as espécies de anfíbios e répteis que ocorrem em Angola, bem com listas dos taxa erradamente referidos para a fauna Angolana. Reconhecemos a ocorrência em Angola de 117 espécies de anfíbios e 278 de répteis, embora muitas destas representem complexos de espécies ou estão atualmente referenciados através de nomes de conveniência até nova avaliação taxonómica. Num caso providenciamos um nome de substituição, *Trachylepis monardi* nom. nov., para resolver uma situação de homonímia secundária.

O presente Atlas tem como objectivo ser uma referência de trabalho para actuais pesquisas e planos de conservação, bem como um catalisador de futuros trabalhos.

INTRODUCTION

Angola, with an area of nearly 1,250,000 km², is one of the largest countries in Africa. Due to its geographic position, it is highly heterogeneous in terms of climate, topography and biomes. Angola's rich landscape diversity and geographic position supports an amazingly diverse yet still poorly known biota. Its complex and troubled recent history made the country almost inaccessible

to researchers for many years, effectively preventing modern surveys and studies, with negative implications for the advancement of biodiversity knowledge and conservation in all of sub-Saharan Africa. Fortunately, the end of the almost 30-year civil war in 2002 and the subsequent social and economic development of the country have created the appropriate climate for the return of scientific research, with support from both the national and international scientific communities. Biodiversity research and conservation initiatives have flourished in the country in the last decade, with Angola becoming a major player in the area, a fact reflected in Angola's recent hosting of World Environment Day on 5 June 2016. Numerous studies on Angolan plants (Figueiredo et al. 2009; Romeiras et al. 2014; Gonçalves and Goyder 2016), birds (Sinclair et al. 2004; Ryan et al. 2004; Sekercioglu and Riley 2005; Mills and Dean 2007; Mills 2010; Mills et al. 2011; Cáceres et al. 2015), mammals (Pitra et al. 2006; Rodrigues et al. 2015; Baptista et al. 2013; Vaz-Pinto et al. 2015, 2016; Themudo et al. 2015), amphibians and reptiles (Frétey et al. 2011; Conradie et al. 2013, 2015, 2016; Ceriaco et al. 2014a,b, 2016a,b; Ernst et al. 2014, 2015; Branch and Conradie 2015) and insects (Serrano and Capela 2013, 2015) including the description of new endemic species (Haacke 2008; Conradie et al. 2012a,b; Carleton et al. 2015; Serrano et al. 2015; Stanley et al. 2016; Svensson et al. 2017) and a new endemic genus (Heinicke et al. 2014), and the publication of species atlases and checklists (Pinto 1983; Crawford-Cabral 1987, 1998; Crawford-Cabral and Veríssimo 2005; Mendes et al. 2013; Mills and Melo 2013; Kipping et al. 2017) are all clear evidence of the current scientific interest in Angolan biodiversity and its conservation.

Angola boasts high herpetofaunal diversity, with 116 amphibian and 273 reptile taxa (278 if marine turtles are taken into account, see Taxonomic Accounts and Appendix Table A1), though this fauna has been neglected, especially when compared to the number of studies on mammals and birds. As an example, there are fewer than 10,000 extant museum specimens of amphibian or reptile from Angola, contrasting with nearly 40,000 museum herpetological specimens from neighboring and smaller Namibia, and >130,000 published records for reptiles alone from South Africa (Bates et al. 2014). Only one-third of Angolan amphibian and reptile species have been assessed by the International Union for Conservation of Nature (IUCN), and 29 of these are assessed as Data Deficient. In general, species distributions are poorly known, threats are unassessed, taxonomic problems are rife, and the species richness of Angola is believed to be underestimated. This situation is exacerbated by the fact that one of the most important collections of Angolan amphibians and reptiles, containing dozens of type specimens critical to resolving taxonomic problems, was destroyed in the 1978 fire at the Museu Bocage in Lisbon.

As part of an international partnership between INBAC, the Instituto Nacional de Biodiversidade e Áreas de Conservação (Luanda, Angola), the California Academy of Sciences (San Francisco, California, USA), the Florida Museum of Natural History at the University of Florida (Gainesville, Florida, USA), Villanova University (Villanova, Pennsylvania, USA), the University of Michigan at Dearborn (Dearborn, Michigan, USA), and the Museu Nacional de História Natural e da Ciência (former Museu Bocage, Lisbon, Portugal), new herpetofaunal field surveys and studies have been launched with funding from the United States National Science Foundation. These new surveys aim to re-survey historical type localities to collect topotypical material and provide new data (morphology, DNA, frog calls, etc.) for taxonomic studies currently impeded by the loss of many critical type specimens. Other research is planned to explore previously unsampled regions in order to better document and understand the diversity and distribution of the Angolan herpetofauna.

This partnership has also resulted in other projects and activities related to the amphibians and reptiles of Angola. All museum records of Angolan specimens have been synthesized and georeferenced through a project funded by the JRS Biodiversity Foundation, and all bibliographic records

were compiled and reviewed and are presented here. These data provide a starting point and overview of the current knowledge on the Angolan herpetofauna. The present work compiles all available published data regarding the diversity and distribution of the Angolan herpetofauna, spanning more than 150 years of herpetological research in the country. It also highlights taxonomic and distributional issues relating to particular taxa, thus suggesting avenues for future research. We deliberately chose to focus solely on bibliographic records, not including the compiled museum records, as the latter will require further detailed reviews and descriptions that fall out of the scope of this publication. We anticipate that the current phase of active herpetological research by several groups will facilitate the eventual production of a comprehensive atlas, along the lines of that recently completed for South Africa, Swaziland and Lesotho (Bates et al. 2014). However, this is not yet feasible and we offer the current work as a tool for future work in both taxonomy and conservation.

THE ANGOLAN LANDSCAPE

POLITICAL AND ADMINISTRATIVE BORDERS OF ANGOLA.— Mainland Angola is limited by the Atlantic Ocean on the west, by the Democratic Republic of the Congo in the north and northeast, by Zambia in the east, and by Namibia in the south (Fig. 1). The Cabinda enclave, a province of Angola, is separated from mainland Angola by the Democratic Republic of the Congo, which it borders to the south and east. It is bordered by the Republic of the Congo in the north and the Atlantic Ocean in the west. Once part of Portugal (also known as Portuguese West Africa), from which it became independent in 1975, the current borders of mainland Angola were originally defined in the Berlin West African Conference in 1884–1885 and in a few subsequent agreements

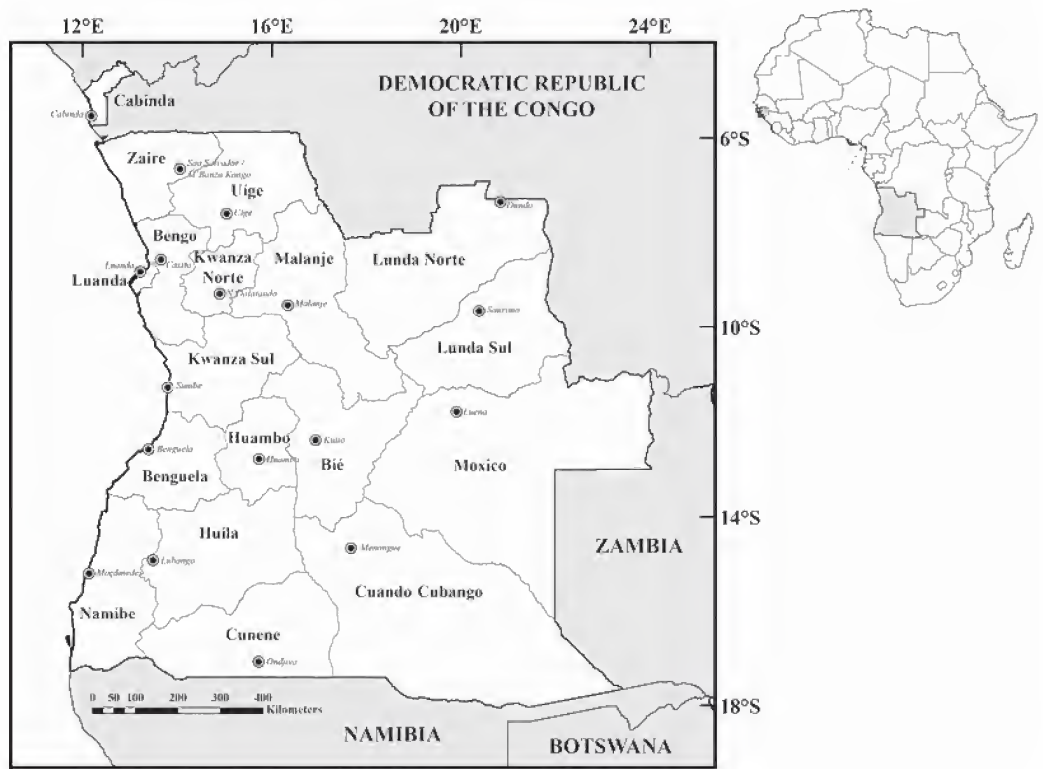


FIGURE 1. Map of Angola, showing the provinces and major towns and position of Angola on the African continent.

between European colonial powers. The Cabinda enclave, a Portuguese protectorate since 1885, also known as Portuguese Congo, was added to Angola after independence. Administratively, Angola is currently divided into 18 provinces — Cabinda, Zaire, Uíge, Bengo, Luanda, Kwanza Norte, Kwanza Sul, Malanje, Lunda Norte, Lunda Sul, Moxico, Bié, Huambo, Benguela, Namibe, Huíla, Cunene and Cuando Cubango — with Moxico being the largest (223,023 km²) and Luanda the smallest (18,826 km²). Angolan provincial delimitations have changed over time. For example, Bengo Province was created in 1980 from areas formerly constituting parts of Luanda and Kwanza Norte provinces, and it has recently decreased in size owing to the expansion of the borders of Luanda. There are plans to divide Moxico and Cuando Cubango provinces into three and two provinces, respectively. Each province is divided into different municipalities (“Municípios”) that are subsequently divided into communes (“Comunas”).

PHYSIOGRAPHY.— The Angolan coastal plain extends from sea level to approximately 250–

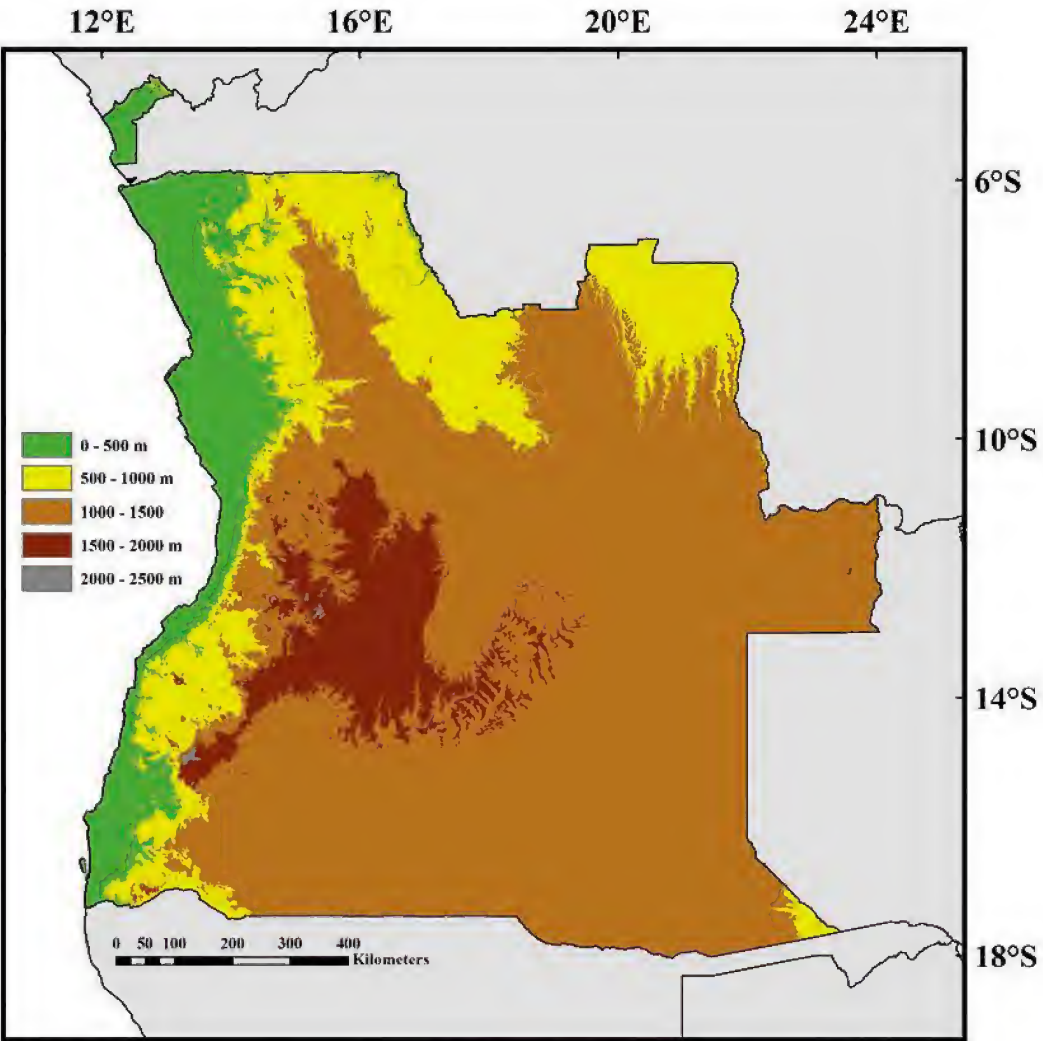


FIGURE 2. The topography of Angola (after Sayre et al. 2013)

300 m elevation, or up to about 500 m in the northwest and southwest areas (Fig. 2). A transition zone rises sharply from 500 m to about 1000 m and is associated with sheer cliffs and the Angolan escarpment in the southwest areas of the country (Fig. 2). The majority of the country lies on the Angolan Plateau, with a elevation between 1000–1500 meters (Fig. 2), with the exception of mountainous areas, mainly in Huambo, Bié and Huíla provinces, that rise over 2000 m, reaching 2620 m at Mount Moco, the highest point of Angola. The escarpment in Angola, represented by Serra da Mocaba and Bié Escarpments, is approximately 1,000 km long and is one of the most isolated sections of the Afromontane Archipelago (Clark et al. 2011). Due to its isolation, it harbors a rich plant diversity, particularly rich in endemics, as well as the highest number of vertebrate endemics in the subcontinent after South Africa (Clark et al. 2011).

RIVER BASINS.— Angola is extensively irrigated by eight main river drainages and a series of coastal rivers (Fig. 3). While the north, including the provinces of Cabinda, Zaire, Uíge, Malanje,

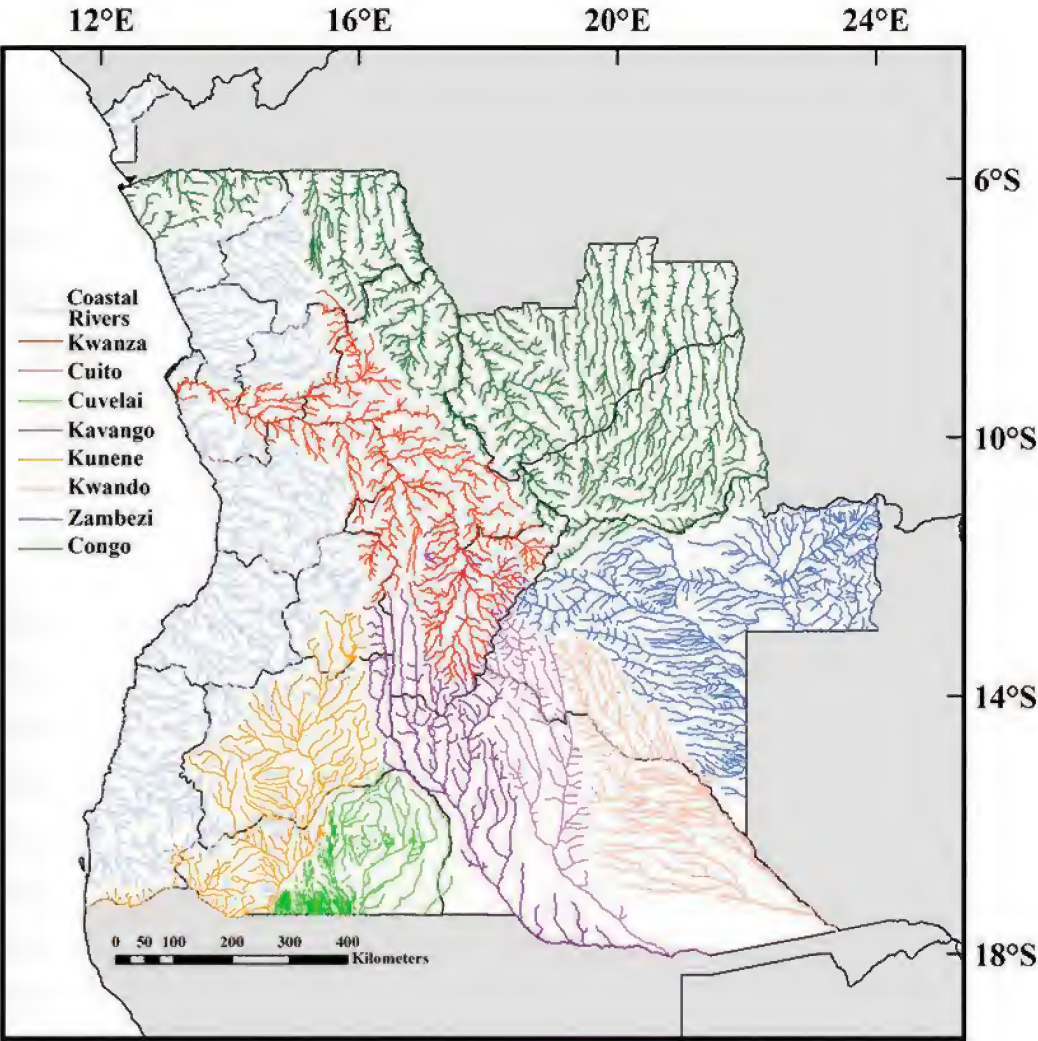


FIGURE 3. River basins of Angola (data from <https://www.arcgis.com/>).

Luanda Norte, Lunda Sul and the northern parts of Moxico, is drained by the Casai-Congo Basin, the central areas of the Angola, and especially the east and southeast, are drained by the Zambezi, Cuando, Cuito, and Cubango rivers. The Cuvelai-Etosha Basin extends from northern Namibia to parts of Cunene and Huíla provinces, whereas the Kunene Basin dominates most of Huíla Province with the main river bordering Namibia along the southern edges of Namibe and Cunene provinces. Finally, the Kwanza, an exclusively Angolan river, starts in Bié and makes a turn to the west in Malanje Province, passing through Kwanza Norte, Kwanza Sul, Bengo and Luanda provinces where it meets the sea. A large part of the west coast of Angola, including the provinces of Zaire, Bengo, Luanda, Kwanza Sul, Benguela, Namibe and Huíla, is drained by smaller, sometimes intermittent, coastal rivers.

GEOLOGY.—Angolan geological history is complex, shaped by different events, with rocks from different geological eras scattered across the country, and a considerable diversity of soils (Schluter 2006). While a large part of the metamorphic rocks of the country derive from the Congo-Kasai Craton, there is a considerable diversity of more recent sedimentary and igneous rocks (Schluter 2006). Coastal areas of Angola are divided by three main basins: the Congo, the Kwanza and the Namib marine coastal basins. These first developed during the Lower Cretaceous and are dominated by sedimentary rocks (both carbonate and non-carbonate) with some areas of sandstone and limestone sands in the southwest (Namibe Province), as well as some alluvial sands, such as those at the mouth of the Congo River at the northwestern border of the country (Schluter 2006; Fig. 4). Sedimentary rocks dominate almost all of eastern Angola, which is largely covered by sands and related Aeolian sediments of the Kalahari Group (Schluter 2006). The main river basins and depressions contain alluvial and colluvial deposits in the form of sands, clays, rubbles and gravels, with the exception of the Cuvelai Basin, which contains saline soils (Schluter 2006; Fig. 4). The more central areas of the country are characterized by a mix of metasedimentary, magmatic, to metamorphic (metaigneous) rocks (Schluter 2006). The Bié Escarpment area is dominated by silica rich soils, originating from volcanic activity, while some intrusive volcanic rocks occur in Huíla, Cunene, and Moxico (Schluter 2006; Fig. 4). A considerable area of the escarpment border is limited by metaigneous rocks, possibly from the old Congo-Kasai Craton, which are also present in some areas in the northeast of the country (Lunda Sul and Lunda Norte provinces; Schluter 2006; Fig. 4).

CLIMATE.—Most of Angola lies within the zone of intertropical trade winds and has a hot wet summer and a warm dry winter (Huntley 1974). The local climates within Angola reflect combinations of elevation, latitude, and distance to the coast. Generally, the coastal and southern areas of the country are hotter (although coastal areas in the Namib are cooler than those further north) whereas temperature tends to diminish with higher latitude and elevation, and especially at higher elevations in the central area of the country (Fig. 5). The variation of mean monthly temperatures is more extreme in the southeast and less pronounced in the north and northeast (Huntley 1974).

Annual rainfall in Angola increases in a roughly southwest to northeast direction, with coastal areas south of Moçâmedes City, Namibe Province) being extremely dry and most central/northeast areas of the country, as well as Cabinda, having an annual rainfall of 1200–1400 mm (Fig. 6). Most of the southern and coastal areas have a less humid climate (Fig. 6). Rainfall is seasonal throughout Angola, with the northeast rainy season being from March to May and that of the southwest being shorter and occurring some time between December and March (Huntley 1974). The northwest experiences a short dry period (*pequeno cacimbo*) in January and February (Huntley 1974).

BIOMES AND VEGETATION ZONES.—Due to its geographic placement, Angola supports a considerable diversity of biomes and vegetation types, from more tropical evergreen and semi-deciduous rainforests in the north to true desert in the extreme southwest. This enormous habitat

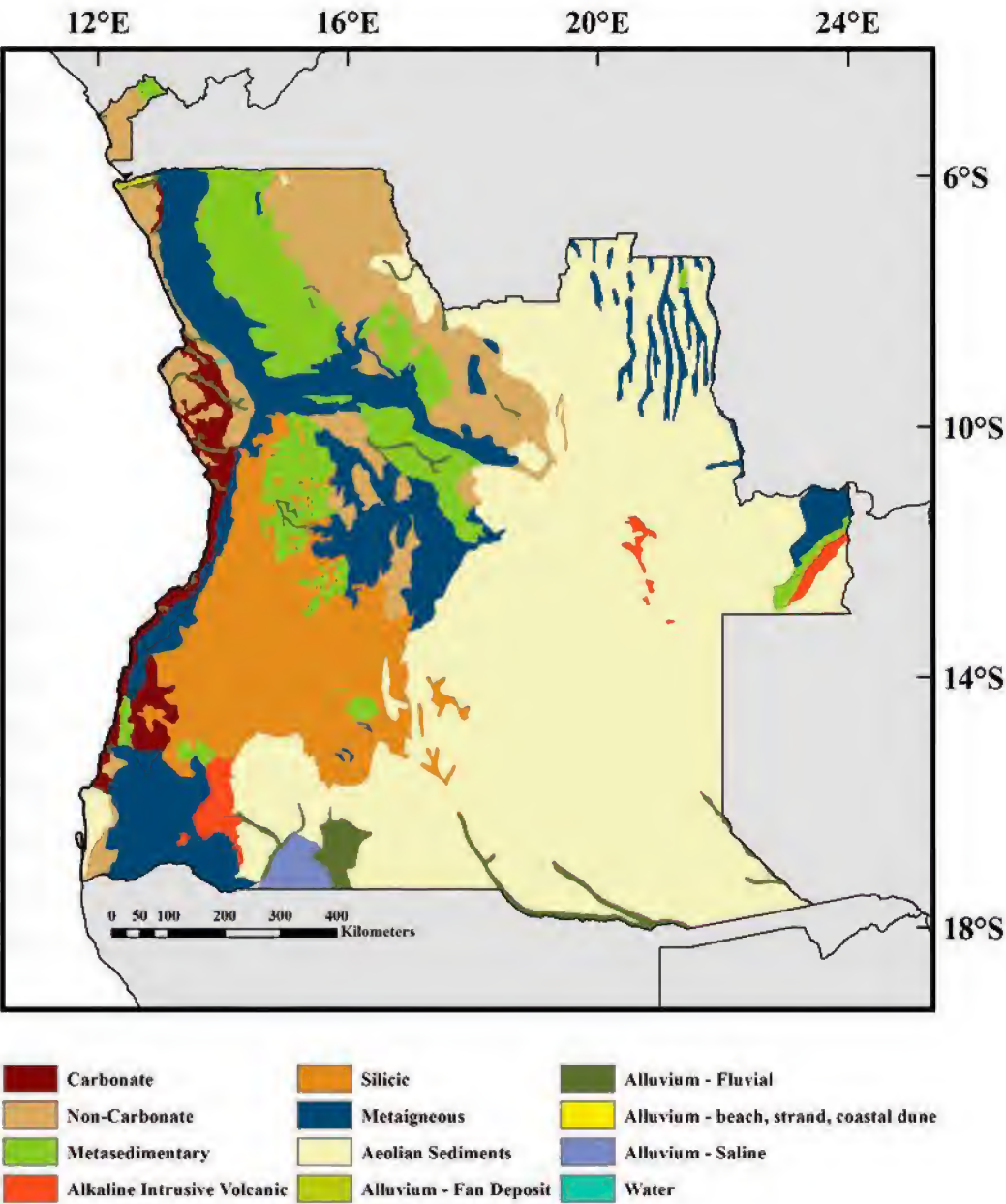


FIGURE 4. The geology of Angola (after Sayre et al. 2013).

diversity translates into a high number of plant species, some of which are endemic. The latest checklist of Angolan flora published by Figueiredo et al. (2009) enumerates 7,296 plant taxa in 250 families and 1745 genera, of which nearly 15% are endemic, which gives Angola the second richest flora in Africa after South Africa. This habitat diversity, combined with the other physiographic elements, has an extremely important effect on animal diversity and distribution, including those of amphibians and reptiles.

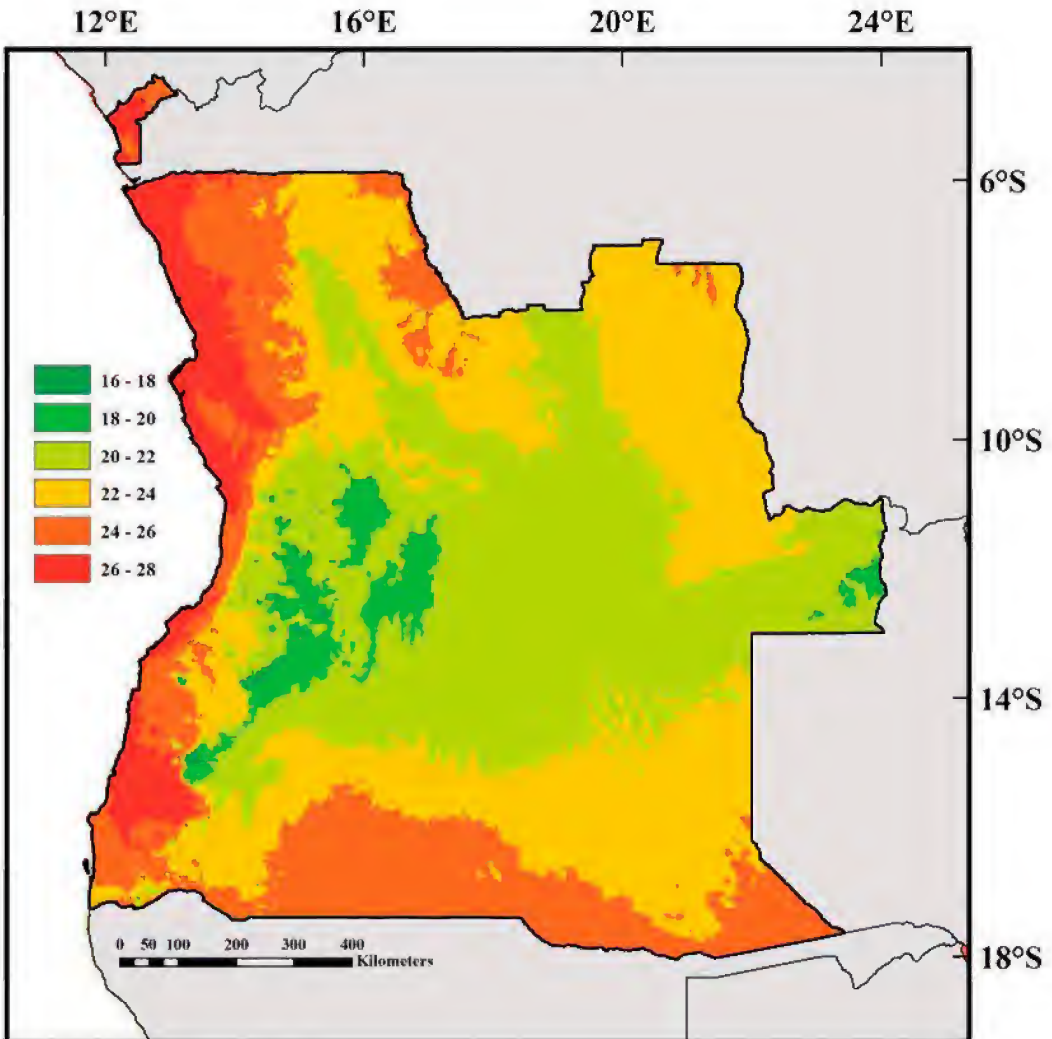


FIGURE 5. Annual mean temperatures of Angola (after Hijmans et al. 2005).

Huntley (1974) recognized five main biomes in Angola. The Guinea-Forest Biome is an evergreen and semi-deciduous rainforest restricted to the interior of Cabinda (Maiombe Forest) and in discontinuous patches of forest in Zaire, Uíge, Kwanza Norte, and Kwanza Sul provinces. The Congo Savanna Biome occurs in the north and is an area of tall grasslands interspersed by gallery forests in the valleys and isolated forests patches on the plateau, mostly occurring in the Congo River basin in Zaire, Uíge, Malanje and Lunda Norte provinces. The Montane Forest Biome is represented in Angola by a few isolated patches of forests on the protected slopes and deep ravines in the mountains of Huambo, Benguela, and Huíla districts, at the highest elevations in the country, generally 2000–2500 meters, including Mount Moco. The *Brachystegia* Biome is dominated by *Brachystegia* (Miombo) woodlands, but is quite diverse across its 750,000 km² extent on the central plateau of Angola. The South-West Arid Biome contains the most arid parts of Angola with extended dry seasons and mostly deciduous plants extending from coastal Luanda to Namibe

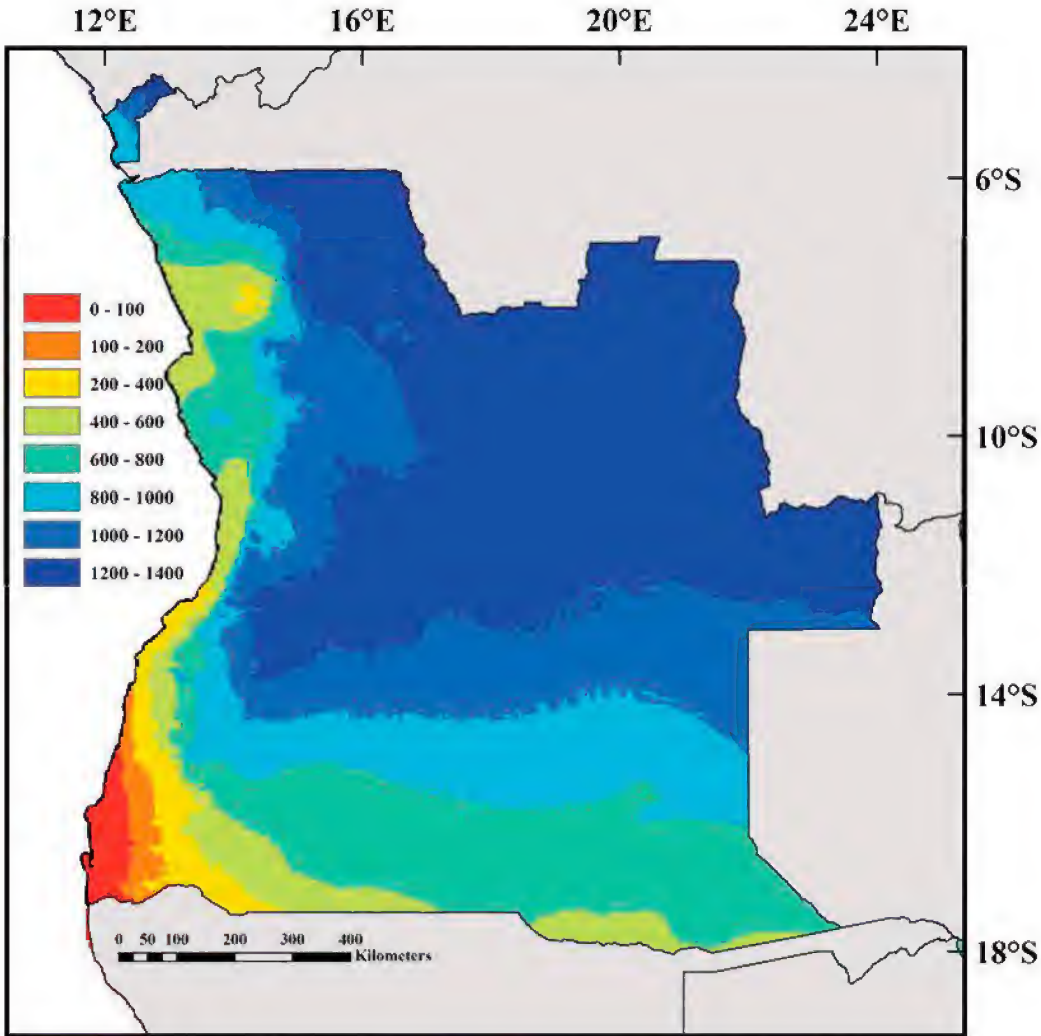


FIGURE 6. Annual mean precipitation in Angola (after Hijmans et al. 2005).

Province and then following the Angolan-Namibian border eastwards. Last, the Escarpment Zone is represented by a discontinuous series of moist vegetation types that follow the Angolan Escarpment from the coastal areas of Zaire, Bengo, Luanda, and Kwanza Sul Province to inland Huambo and Huíla. Depending on the location in Angola, the Escarpment Zone shares affinities with neighboring biomes but may also act as a barrier between them.

In contrast to Huntley (1974), other recent authors have taken a more fine-grained approach to characterizing Angolan habitats. This led Olson et al. (2001) to recognize 15 different ecoregions for Angola (Fig. 7): Atlantic Equatorial Coastal Forest in northeastern Cabinda Province (Fig. 8), Western Congolian Forest-Savanna Mosaic in Cabinda, Zaire, Uíge and Malanje provinces (Fig. 9); Central African Mangroves in northeast Zaire Province, following the Zaire River mouth; Southern Congolian Savanna Mosaic in parts of Lunda Norte, Lunda Sul and Malanje; an extensive Angolan Scarp Savanna and Woodland area, forming a continuous distribution from the

coastal areas of Zaire, Bengo, Luanda, and Kwanza Sul provinces to inland Huambo and Huíla (Fig. 10); an Angolan Montane Forest-Grassland mosaic in the higher areas of Kwanza Sul, Huambo, Bié and Huíla (also known as the Bié Escarpment as noted above, and supporting one of the most critically endangered and most biodiversity-rich areas in the narrow band known as “cloud forest” or “Angolan Escarpment Woodlands” (Clark et al. 2011); areas of Central Zambezian Miombo Woodlands (Fig. 11), Western Zambezian Grasslands, and Zambezian *Cryptosepalum* Dry Forest in the eastern parts of Moxico; an immense area of Angolan Miombo Woodland (Fig. 12), covering most of the central plateau, but extending to the coast in some areas of Kwanza Sul Province; most of the southern and southeast borders of the country are characterized by Zambezian *Baikiaea* Woodlands (Fig. 13) and some Zambezian Flooded Grasslands occur in the extreme

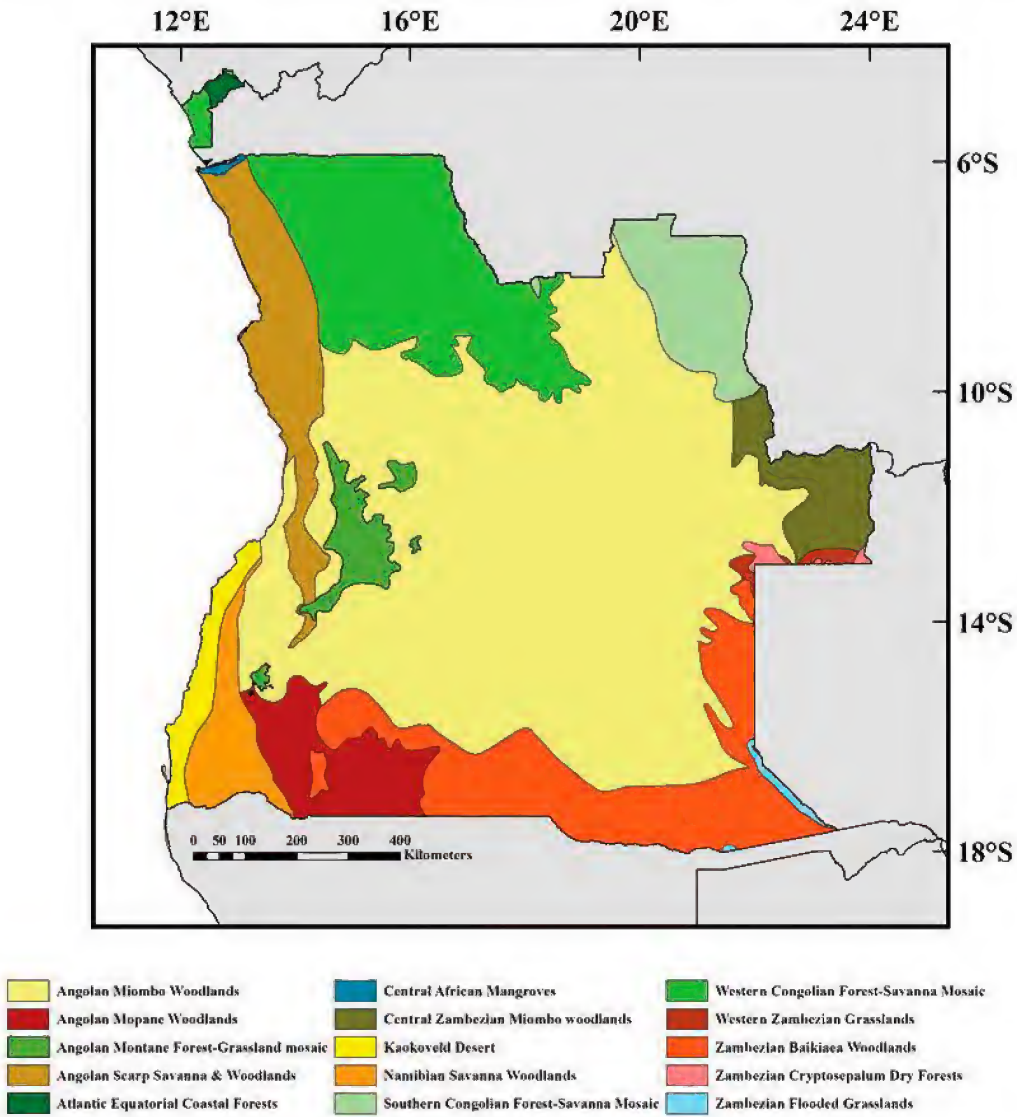


FIGURE 7. Major ecoregions of Angola (after Olson et al. 2001).



FIGURE 8. Wetland in Atlantic Equatorial Coastal Forest in Maiombe Forest, northeastern Cabinda Province (Photo by Cândido Carneiro).



FIGURE 9. Western Congolian Forest-Savanna Mosaic in Uíge Province (Photo by Raffael Ernst).



FIGURE 10. Angolan Scarp Savanna and Woodland area near Condé, Kwanza Sul Province (Photo by Luis Ceríaco).



FIGURE 11. Central Zambezian Miombo Woodlands near Ikelenge, on the Angola-Zambia border (Photo by Philipp Wagner).



FIGURE 12. Angolan Miombo Woodlands in Cangandala National Park, Malanje Province (Photo by Luis Ceriaco).



FIGURE 13. Zambezian *Baikiaea* Woodlands behind Kavango River shore in Cuando Cubango Province (Photo by Aaron M. Bauer).



FIGURE 14. Kaokoveld desert near Espinheira, Namibe Province (Photo by Luis Ceríaco).



FIGURE 15. Namibian Savanna Woodlands near Virei, Namibe Province (Photo by Luis Ceríaco).



FIGURE 16. Angolan Mopane Woodlands in southern Cunene Province and adjacent Namibia (Photo by Aaron M. Bauer).

southeast of the country in Cuando Cubango Province; the southwestern coastline, from south of Benguela to the border of Namibia is dominated by Kaokoveld desert (Fig. 14), replaced inland by Namibian Savanna Woodlands (Fig. 15), whereas some of the southern areas of Huíla and Cunene support Angolan Mopane Woodlands (Fig. 16).

HISTORY OF HERPETOLOGICAL RESEARCH IN ANGOLA

The history of Angolan herpetology, as well the history of other zoological disciplines in Angola, is almost as unexplored as the country's biodiversity. Crawford-Cabral and Mesquitela (1989) first attempted to summarize the main expeditions and works relating to Angolan vertebrates, presenting maps for collecting localities of the most important of these. Given the historical nature of most bibliographic records, it is important to review in more detail the history of herpetology in Angola in order to better understand the development of our current knowledge on the diversity and distribution of amphibians and reptiles in the country. While the "birth" of Angolan herpetology as a discipline was only in the 1860s, the precedents for the scientific study of Angolan herpetofauna extend as far back as the second half of the seventeenth century. One of the first written accounts on Angolan biodiversity is that of António de Oliveira de Cardonega (1623–1690), a Portuguese military officer who lived in Angola from 1639 to 1690 and wrote the manuscript *História geral das guerras Angolanas* (General history of the Angolan wars) in 1680; the manuscript was only published as a facsimile edition in 1940 (see Cardonega 1940–1942). This manuscript provides some notes on the fauna of the country and provides comments on snakes, crocodiles (Fig. 17), and lizards. Another seventeenth century author that described different types of snakes and lizards from Angola was the Italian Capuchin Missionary Giovanni Antonio Cavazzi



FIGURE 17. Depiction of a crocodile from Cardonega's *História Geral das Guerras Angolanas* (Cardonega 1940–1942).

de Montecuccolo (1621–1678), who lived in Angola from 1654 to 1667, and wrote the *Istorica Descrizione de' tre' regni Congo, Matamba et Angola* (An historical description of three kingdoms: Congo, Matamba, and Angola; Cavazzi 1687) that compiled his observations on Angolan nature, culture, and society.

The arrival of the Italian naturalist Domingos (formerly Domenico) Vandelli (1735–1816) in Portugal led to the adoption of Linnaean ideas and methods in the Portuguese scientific community. It also led to the creation of the Royal Botanical Garden and Cabinet of Natural History of Ajuda (1768) in Lisbon and the Botanical Garden and Cabinet of Natural History of the University of Coimbra (1772), and thus marked the beginning of modern natural history studies in the country and in the territories under its dominion (Ceríaco *in press*). Following a plan to study the natural resources of the Portuguese colonies, Vandelli and the Portuguese Crown promoted four “philosophical” voyages to Portuguese overseas territories – all carried out by Vandelli’s students (Simon 1983, Ceríaco *in press*). One of these “philosophical” voyages was that undertaken by Joaquim José da Silva (birth and death dates unknown) to Angola, where he was appointed as colonial secretary in the territory and entrusted to conduct natural history surveys, shipping back all the collected natural history specimens to the Ajuda Cabinet in Lisbon. Silva remained in Angola from 1783 to 1810, but the difficulties experienced during the field surveys and the time-consuming work as colonial secretary prevented him from providing Ajuda with the desired specimens and collections. Of the few shipments known to have been dispatched to Ajuda, none included herpetological specimens (Ceríaco *in press*). In 1836, Francisco Assis de Carvalho (1798–1851), who was at the time director of the National Museum of Lisbon (the successor of the Ajuda Cabinet after 1836), published an instructional booklet aimed at those who could contribute zoological specimens from the overseas territories to the museum (Carvalho 1836). It listed animal specimens in the collections that could be found in Angola. Of the few animals cited for Angola (seven mammals, seven birds, one fish), no amphibian or reptile species was listed. During all of the first half of the nineteenth century, the only information available about the herpetology of the region surrounding Angola, in the Zaire Basin between Congo and northern Angola, was the reference to three species of reptiles, “*Tryonix aegyptiacus*” (currently *Trionyx triunguis* (Forskål, 1775)), “*Coluber palmarum*” (currently *Dasypeltis palmarum* (Leach, 1818)), and “*Coluber Smythii*” (currently *Graya smithii* (Leach, 1818)), that were collected and shipped to Europe by James Kingston Tuckey’s (1776–1816) expedition to the area in 1816 (Bocage 1895a).

However, from the 1850s onwards, several dedicated expeditions to Angola were planned, and the flux of colonial officers, merchants and other Europeans to the country established an important network between the field and natural history museums in many European capitals, especially Lisbon (Ceríaco *in press*). The first main expedition to yield important herpetological results was that conducted by the Austrian naturalist Friedrich M. J. Welwitsch (1806–1872). Welwitsch was appointed by the Portuguese Government to conduct a botanical expedition to Angola to collect

specimens for Lisbon and provide the basis for the knowledge of the Angolan flora and vegetation. This botanical expedition was carried out between 1853 and 1860 and also resulted in the collection of zoological specimens. Divided into three main areas, Welwitsch's expedition explored areas around Luanda, from Quicembo (Zaire Province) to the Kwanza River mouth (currently Luanda and Bengo provinces), areas around Golungo Alto and Pungo Andongo and adjacent rivers (currently Kwanza Norte and Malanje provinces), and finally areas in the southwestern part of the country, from the Benguela area to Moçamedes, Baía dos Tigres and as far as inland as the Huíla Plateau (currently, Benguela, Namibe and Huíla provinces). Despite the agreement and obligations derived from his contract with the Portuguese government that mandated that all collected material would be deposited in Portugal, Welwitsch offered a considerable part of the collected material to the British Museum, especially the zoological specimens (Gomes 1876; Günther 1876a; Bocage 1876). The small herpetological collection offered by Welwitsch to the British Museum was studied by Albert Günther (1830–1914) and John Edward Gray (1800–1875), who described three new species of reptiles from it: *Dendraspis welwitschii* Günther, 1865, currently considered a synonym of *Dendroaspis jamesoni* (Trail, 1843); *Dalophia* (currently *Monopeltis*) *welwitschii* Gray 1865; and *Psammophis* (currently *Psammophylax*) *acutus* Günther, 1888.

A more systematic study of Angolan herpetofauna was initiated by the Portuguese zoologist José Vicente Barbosa du Bocage (1823–1907; Fig. 18). Bocage was appointed director of the zoological section of the National Museum of Lisbon in 1858, a position he kept until his death, and coordinated an important network of collaborators and explorers who sent him many specimens from Angola.

Among the most important collaborators and explorers were the Portuguese captain Francisco António Pinheiro Bayão (1833–1883), established in Malanje Province between 1863 and 1866, and the Portuguese explorer José Alberto de Oliveira Anchieta (1832–1897; Fig. 19), who explored Angola from 1866 to 1897 without interruption, during which time he collected specimens exclusively for the Lisbon Museum and largely contributed to the knowledge of the Angolan herpetofauna. Pinheiro Bayão was initially based in



FIGURE 18. Portrait of Barbosa du Bocage, from around the 1860s (source Arquivo Histórico Museu Bocage).



FIGURE 19. Portrait of José Alberto de Oliveira Anchieta (source Arquivo Histórico Museu Bocage).

Duque de Bragança district, (Malanje Province), but was later transferred to Luanda as a prisoner following problems with the local governor (see Ceríaco *in press* for details), and sent Bocage some of the first shipments of Angolan specimens received in Lisbon, mostly from Duque de Bragança, Dondo, and Luanda. Among these collections was a considerable amount of herpetological material, including specimens used by Bocage and other naturalists to describe several new species. Initially Bocage let foreign naturalists study this material. Thus, *Cystignathus Bocagii* (currently *Leptopelis bocagii*), and *Hyperolius nasutus* were described by Günther (1865a), *Limnophis bicolor* by Günther (1865b), and *Hyperolius marmoratus* var. *angolensis* and *Hyperolius bocagei* by the Austrian naturalist Franz Steindachner (1834–1919) (Steindachner 1867). The first Angolan species described by Bocage himself was *Rana bragantina* Bocage, 1864, currently a synonym of *Hoplobatrachus occipitalis* (Günther 1858), based on a specimen sent by Bayão from Duque de Bragança. In all, Bocage described 11 new amphibian taxa and 12 new reptiles based on Bayão's material, as well as adding several taxa to the list of Angolan herpetofauna.

Anchieta, who was later hired by the Lisbon Museum to lead a four-year zoological expedition to Angola (which ultimately lasted 36 years), initially explored the Cabinda, Loango, Lolembó, Rio Quilo and Zaire regions of the country, in a personal expedition to the country between 1864 and 1865 leading to the description of *Euprepes anchietae* (currently considered a synonym of *Trachylepis maculilabris*), *Ablepharus* (currently *Panaspis*) *cabindae*, and *Leptophis* (currently *Philothamnus*) *dorsalis* (another specimen in the type series was from Bayão). From 1866 onwards, Anchieta was employed by the museum and collected thousands of specimens that he sent to the Lisbon museum, thus contributing greatly to the expansion of knowledge of the Angolan herpetofauna and leading to the description of dozens of new taxa. His explorations were geographically distributed across almost all the western provinces of the country (Luanda, Bengo, Cuanza Norte, Cuanza Sul, Benguela, Huambo, Bié, Huíla, Namibe and Cunene). Anchieta died in 1897 in Caconda during a field expedition near the town (Fig. 20). Anchieta is still universally considered the most important herpetological collector in Angola based on the diversity and volume of his collections.

Besides Bayão and Anchieta, other private individuals contributed to Bocage's pioneering studies on Angolan herpetology. This includes the following individuals: Portuguese businessman João Toulson (birth and death dates unknown), who between 1864 and 1868 sent at least three shipments of zoological specimens to Bocage from Luanda including one reed frog specimen that would serve as the basis for *Hyperolius toulsonii* Bocage 1867a (currently part of the *H. angolensis* complex); J. A. Botelho (birth and death dates unknown), who sent some herpetological specimens from Novo Redondo (now Sumbe, Kwanza Sul Province; see Bocage 1867b); "M. Graça" (see Bocage 1873a), who sent specimens from Huíla; "Padre" (Father) António José de Sousa Barroso (1854–1918), chief of the Catholic Mission in São Salvador do Congo (currently M'Banza Congo, Zaire Province), who sent Bocage specimens from the vicinity of the Mission; and J. Bernardino d'Abreu Gouveia (birth and death dates unknown), who also sent specimens from "Congo" to Lisbon (Bocage 1887a). Two other individuals who greatly contributed to Bocage's works were the Portuguese explorers Hermengildo Carlos de Brito Capello (1841–1917) and Roberto Ivens (1850–1898), who conducted two major expeditions. The first (1877–1880) from Benguela to Iaca to study the Zaire and Zambezi basins (exploring the Benguela, Bié and Cassange areas in Angola), and the second a transcontinental journey (1884–1885) from southern Angola (Pinda, in Namibe Province) to Quelimane in Mozambique. New data and collections resulted from both these expeditions, including the types of *Euprepes* (currently *Lubuya*) *ivensii*, *Rana* (currently *Hildebrandtia*) *ornatissima* (1879a,b) and *Vipera* (currently *Bitis*) *heraldica* (Bocage 1889) from the first, and *Psammophis sibilans* var. *stenocephalus*, and *Psammophis sibilans* var. *leopardinus*

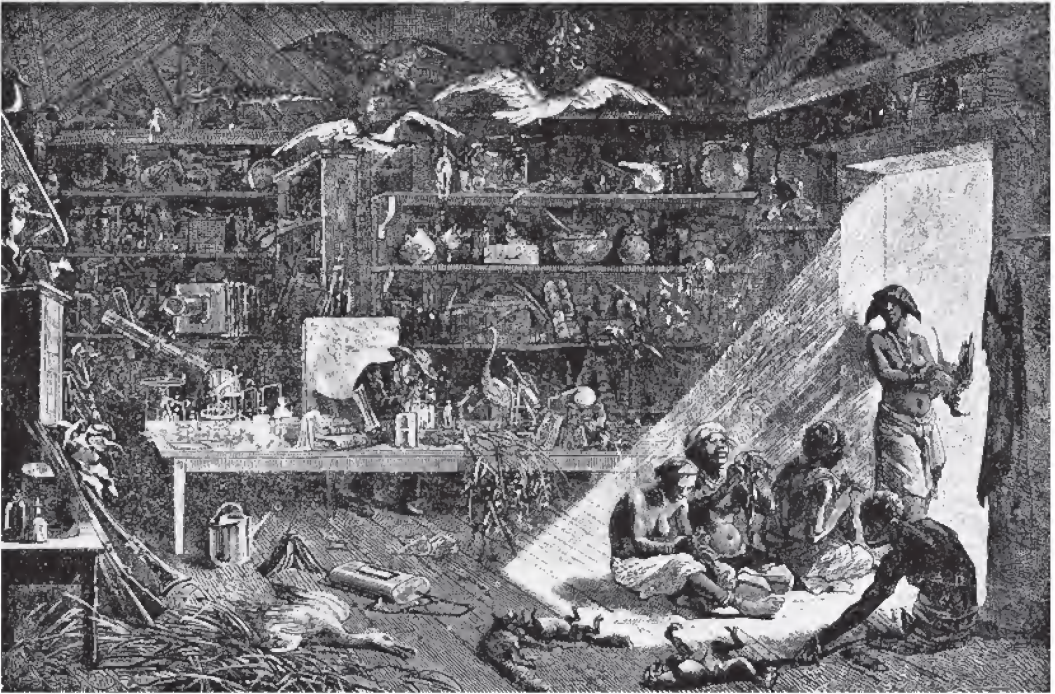


FIGURE 20. Depiction of Anchieta's laboratory in Caconda (source Arquivo Histórico Museu Bocage, artist and date unknown).

from Namibe Province, obtained during the exploration of the Curoca River basin on the second (Bocage 1887b).

Bocage dedicated the following decades to the study of Angolan fauna with a special interest in herpetology and ornithology, and he published 24 contributions on the Angolan herpetofauna (Bocage 1864, 1866a,b, 1867a,b,c,d, 1870, 1872, 1873a,b, 1876, 1879a,b,c, 1882a, 1886a, 1887a,b,c, 1888, 1889, 1890, 1893, 1895a,b, 1896a,b, 1897a,b). As his major contribution to the study of the Angolan herpetofauna, Bocage published "*Herpetologie d'Angola et du Congo*," the first, and until now, the only complete summary of Angolan amphibians and reptiles, comprising at the time a total of 191 species (41 amphibians and 150 reptiles; Bocage 1895a). Since the time of Bocage, the number of known herpetological taxa has more than doubled.

Under the direct supervision of Bocage, the Portuguese naturalist José Júlio Bettencourt Ferreira (1866–1948) was appointed as assistant in the herpetological collections of the National Museum of Lisbon and started his career studying the Angolan herpetofauna (Ferreira 1897a), including the specimens of the last shipment sent by Anchieta (Ferreira 1897b). Bocage died in 1907, and although his last papers were published in 1905, his age and delicate health effectively incapacitated him during the first years of the twentieth century. Due to Bocage's condition, Bettencourt Ferreira pursued the study of the Lisbon Museum Angolan material, especially that sent by private collectors and donors (Ferreira 1900, 1903). Ferreira was also responsible for the study of the herpetological material of Francisco Newton's expedition to Angola. Newton (1864–1909; Fig. 21), who had collected extensively for the Lisbon Museum and Bocage in the Cape Verde Islands, the Gulf of Guinea, and Timor, was hired by the Polytechnic Academy of Porto to lead an expedition to Angola. This expedition (1903–1905) focused on Luanda, Bengo, Kwanza Norte, Kwanza Sul, Malanje, and Namibe provinces. Ferreira published upon the collections made from

Luanda to Malanje on two different occasions (Ferreira 1904, 1906) resulting in the description of nine amphibian and one reptile species, some of which continue to be particularly problematic (Cerfaco et al. 2014a). The material collected in Namibe by Newton was never reviewed by Ferreira and it, along with the majority of Newton's collection, is still housed in the Museu de História Natural da Universidade do Porto, Portugal.

Other nineteenth century European naturalists, such as Albert Günther, Wilhelm Peters (1815–1883), and George Albert Boulenger (1858–1937), also described new species from Angola based mostly on specimens sent by particular collectors. The British lieutenant Verney Lovett Cameron (1844–1894), who explored Angola from the northeast (Lunda provinces) to Bié and Benguela in 1875, sent a small Angolan collection to the British Museum, including five reptile specimens (representing five different taxa), including the type of *Ahaetulla bocagii* described by Günther (1888) (currently a synonym of *Philothamnus variegatus*). Peters received herpetological material from two main German expeditions to the country. The first German expedition (1873–1876) was to the “Kingdom of Loango” Chinchoxo (Cabinda Province) and Loango (Malanje Province) sponsored by the *Africanische Gesellschaft* and led by Paul Gussfeldt (1840–1920) in the company of Dr. Julius Falkenstein (1842–1917), Max Buchner (1846–1921), and Major Friedrich Wilhelm A. von Mechow (1831–1904). The second German expedition by von Mechow and Major A. von Homeyer (1834–1903) to Malanje (Kwango River) and Pungo Andongo occurred from 1879 to 1882 and included an incursion to the Lundas from 1879–1880 by Buchner. From the first expedition to Chinchoxo, Peters described *Agama colonorum* var. *congica* (currently considered a full species), *Neusterophis atratus* (currently considered a synonym of *Natriciteres olivacea* (Peters, 1854)), *Atractaspis congica*, *Hyperolius leptosomus* and *Hyperolius adpersus* (Peters 1877a), and also *Euprepes notabilis* (Peters 1879; currently considered a synonym of *Trachylepis maculilabris* (Gary, 1845)). For this last description, Peters also used one specimen from Pungo Andongo from Major A. von Homeyer. Based on the Malanje collection from Mechow, Peters (1881) described *Xenocalamus mechowii* and *Microsoma collare*, and *Hyperolius vermiculatus* (Peters 1882a) (currently considered a part of the *Hyperolius angolensis* species complex). From Buchner's Lundas expedition, he described *Bufo* (currently *Sclerophrys*) *buchneri* (Peters 1882b).

Boulenger described several new species from Angola based partly on material sent by Bocage. These include *Mabouia* (currently *Trachylepis*) *bocagii* (Boulenger, 1887) based on two specimens, one collected by Pinheiro Bayão in Duque de Brangança (currently Calandula) and other by F. Welwitsch collected at Pungo Andongo, and *Lycophidion meleagre* Boulenger, 1893 from Ambrizette. In addition, Boulenger studied the collection of Indian-born William John Ansorge (1850–1913), who explored the Congo basin between 1903 and 1909 and collected extensively in Angola (Luanda, Bengo, Kwanza Norte, Malanje, Bié, Huíla, Benguela and Namibe provinces) from 1903 to 1905. Ansorge's collections were sent to the British Museum where they



FIGURE 21. Portrait of Francisco Newton (source Arquivo Histórico Museu Bocage).

were studied and published on by Boulenger on four different occasions (Boulenger 1905, 1907a,b, 1915). The importance of Ansoerge's collections is reflected in the great number of descriptions based on them: *Arthroleptis xenochirus* Boulenger, 1905, *Arthroleptis* (currently *Phrynobatrachus*) *parvulus* Boulenger, 1905, *Rana* (currently *Ptychadena*) *bunoderma* Boulenger, 1907a, *Rana* (currently *Tomopterna*) *cryptotis* Boulenger, 1907b, *Psammophis ansorgii* Boulenger, 1905, *Causus bilineatus* Boulenger, 1905, *Phyllodactylus* (currently *Afrogecko*) *ansorgii* Boulenger, 1907a, *Mabuia* (currently *Trachylepis*) *laevis* Boulenger, 1907a, *Mabuia* (currently *Trachylepis*) *ansorgii* Boulenger, 1907a (currently considered as subspecies of *T. sulcata*), and *Prosymna angolensis* Boulenger, 1915.

From the 1910s onwards, several new expeditions led mostly by foreign naturalists resulted in important herpetological collections, and were studied and published on by several authors. These expeditions were connected to the political momentum of Portugal. After the end of the monarchy and implementation of the Republic in 1910, Portugal greatly strengthened its colonial agenda, opening the doors to several scientific initiatives to what then was the Colony of Angola. The first of these expeditions to explore Angolan territories was co-promoted by the Ministry of Public Education and the French Geographic Society and was directed by the Count Jacques de Rohan-Chabot (1889–1958). This trip explored the central southern regions of Angola and Rhodesia (currently Zimbabwe and Zambia) in 1912–1914. The resulting collections were deposited in the Muséum National d'Histoire Naturelle (MNHN) in Paris, and herpetological results of the expedition (almost all from Cunene and Cuando Cubango Provinces) were published by Angel (1923) who described *Typhlacontias rohani*. The Swedish naturalist and curator of Göteborgs Naturhistoriska Museum Hilmer Nils Erik Skoog (1870–1927) visited southern Angola, namely Namibe Province, in 1912 as part of his two year expedition to Southern Africa (1912–1913). Although his interests were in other groups, he collected, or obtained from local collectors, specimens studied by the Swedish herpetologist Lars Gabriel Andersson (1868–1951), including the type of the remarkable Desert Plated Lizard, *Gerrhosaurus skoogi*, named in his honor (Andersson 1916).

During the 1920s and 1930s, Angola came to the attention of some of the major North American natural history institutions, including the American Museum of Natural History (AMNH) in New York, the Academy of Natural Sciences of Philadelphia (ANSP), and the Carnegie Museum (CM) in Pittsburgh. In 1925, Arthur S. Vernay (1877–1960) organized the Vernay Expedition to Angola with the goals of collecting zoological specimens for the AMNH, including the iconic and mysterious Giant Sable (*Hippotragus niger variani* Thomas, 1916) endemic to Malanje Province. In addition to Vernay, the AMNH taxidermist Herbert Lang (1879–1957), the ornithologist Rudyerd Boulton (1901–1983), and Alan and Charles Chapman, two young Englishmen living in Angola at the time,



FIGURE 22. An overview of the field gear and conditions of the Vernay Expedition to Angola (source American Museum of Natural History).

also participated in this expedition to the center and southwest of Angola (Malanje, Kwanza Sul, Benguela, Huambo, Huíla and Namibe provinces; Fig. 22). This expedition yielded a huge collection of amphibians and reptiles, of which only the snakes (202 specimens representing 39 forms, three of them new to science: *Mehelya vernayi*, *Naja nigricollis nigricincta*, and *Aspidelaps lubricus cowlesi*) were studied and published on by Charles M. Bogert (1908–1992) in 1940. The remaining specimens remain mostly unstudied although specimens collected on the Vernay Expedition were recently used in the description of the new Angolan endemic cordylid *Cordylus namakuiyus* Stanley et al., 2016 and by the British/American zoologist Arthur Loverdige (1891–1980) to describe *Afroedura karroica bogerti* (currently *Afroedura bogerti*) and *Pachydactylus scutatus angolensis* (Loverdige 1944), elevated to full species by Bauer et al. (2002a).

Also with the intent of collecting specimens of the Giant Sable for the creation of a diorama, the ANSP organized the Gray Expedition to Angola led by the American hunter Prentiss N. Gray (1884–1935). In the first of the two expeditions (1929), Gray was accompanied by the ornithologist Wilfrid Wedgwood Bowen (1899–1987) and by an employee of the *Companhia de Diamantes de Angola*, J. R. Evans (birth and death dates unknown). In August 1930, Harold T. Green (1896–1967) led a second expedition promoted by the ANSP to Angola to collect additional material for the diorama, and some reptiles and amphibians were collected. This latter expedition took three months, beginning in Lobito and then spending most of the time in the area of Malanje, but also with a small incursion into Katanga (then in the Belgian Congo). This small collection, still extant in the ANSP, was never published upon.

From 1930 to 1931, Ralph Pulitzer (1879–1939) and his wife Margaret Kernochan (née Leech) Pulitzer and (Wolfrid) Rudyerd Boulton, Jr. (1901–1983) and his wife Laura Theresa (née Crayton) Boulton (1899–1980) carried out the Pulitzer Angola Expedition that was promoted by the Carnegie Museum (CM). This expedition mainly focused on mammals and birds and explored areas in the center (Bié Province) and southwest (Benguela, Namibe, Huíla and Cunene provinces). It yielded important herpetological results that were published by Karl Patterson Schmidt (1890–1957) at the Field Museum of Natural History (FMNH), Chicago. Due to the involvement of Schmidt, duplicates of some species were deposited in the FMNH, while the majority of the material remained in CM. Schmidt published the results in two principal papers, the first dedicated to reptiles (Schmidt 1933) and the second to amphibians (Schmidt 1936). The reptile collection, comprising 457 specimens belonging to 40 different species, was used by Schmidt (1933) to describe four new taxa – *Rhoptropus boultoni*, *Pachydactylus bibronii pulitzerae*, *Lygodactylus laurae*, and *Varanus albigularis angolensis*. The amphibian collection included 442 specimens representing 17 different species, which, though not including any new taxa, did represent several important range extensions (Schmidt 1936).

At about the same time that North American institutions undertook expeditions in Angola, several European institutions and individuals also promoted expeditions to the Portuguese colony. One of the most important collectors was the Swiss naturalist Albert Monard (1886–1952; Fig. 23). He undertook two large expeditions to Angola for the Museum of La Chaux-de-Fonds (where the collections still exist) in collaboration with the former National Museum of Lisbon, then renamed the Museu Bocage (Monard 1931, 1932, 1937a,b, 1938).

The first of Monard's trips was originally designed as a private hunting endeavor organized by other Swiss nationals. This trip lasted from July 1928 to February 1929 (but only three months were effectively dedicated to specimen collecting) and explored Chimporo, Ebanga, Kakindo, Kuvangu, Kalukembé, Catumbela, Santo Amaro, Vila da Ponte, Bimbi, Caquindo, Chimporo, Kuvelai and Mbalé, all in the southern areas of the country (Benguela, Huíla, Cunene, Bié, Cuan-do Cubango provinces). The resulting collection comprised 45 herpetological specimens, repre-

senting 23 species, including the type material for two species of amphisbaenids – *Monopeltis okavangensis* Monard, 1930 (currently considered a synonym of *Monopeltis anchietae* (Bocage, 1873)) and *Amphisbaena ambuellensis* Monard, 1930 (currently considered a synonym of *Zygaspis quadrifrons* (Peters, 1862)). Encouraged by the results of the first expedition, Monard, in close contact with the Portuguese colonial administration, organized a second expedition to Angola that left Europe in March 1932 and lasted until November 1933. This second expedition revisited some areas surveyed in the first, but also continued further north covering more areas in Benguela Province as well as in Huambo. The herpetological results of the second trip were far greater and diverse than those of the first. The resulting collection comprised nearly 400 specimens, among which were many new species records for the country. It also included several new species, both among amphibians — *Hyperolius cinereus* Monard, 1937, *Hyperolius erythromelanus* Monard, 1937 (currently considered a member of the *Hyperolius angolensis* complex), *Rana (Ptychadena) keilingi* Monard, 1937, *Rana (Ptychadena) buneli* Monard, 1937 (currently considered a synonym of *Ptychadena bunoderma*), *Bufo regularis humbensis* Monard, 1937 (currently considered a member of the *Sceloporphys regularis* complex), and *Cassionopsis* (currently *Kassina*) *kuvangensis* Monard, 1937 — and reptiles — *Monopeltis devisi* Monard, 1937 (currently considered a synonym of *Monopeltis anchietae* (Bocage, 1873)), *Monopeltis granti kuanyamarum* Monard, 1937 (currently considered a synonym of *Dalophia pistillum* Boettger, 1895), *Mabuya* (currently *Trachylepis*) *striata angolensis* Monard, 1937 (currently *Trachylepis monardi* nom. nov. see taxonomic account), and *Tetradactylus lundensis* Monard, 1937 (currently considered a synonym of *Tetradactylus ellenbergeri*).

Heinrich Ernst Karl Jordan (1861–1959) from the Tring Museum conducted an expedition to South-West Africa (currently Namibia) and Angola in 1934. During this trip, he made an important collection of reptiles and amphibians from several areas in Angola, ranging from the forests and swamps of Congulu and Quirimbo (Kwanza Sul Province) and the open forests of Mount Moco and Catengue (Huambo and Benguela provinces respectively), to the dry, granitic, sandy or limestone areas of Bocoio, Lobito and Morro de Pundo (Benguela Province). This material would be later studied by Parker (1936) and lead to the description of one snake and two amphibian taxa. From 1937 to 1938, Wilhelm Schack (1909–1959) collected material in Cubal (Benguela Province) that was sent to the German herpetologist Robert Mertens (1894–1975) at the Senckenberg Museum in Frankfurt. The collection, containing 439 specimens of 42 different species, was the basis for the description of *Rhoptropus boultoni benguellensis* and *Agama planiceps schacki* (Mertens 1938). David Sjölander (1886–1954), curator of Göteborgs Naturhistoriska Museum in Sweden,



FIGURE 23. Figure Albert Monard with a specimen of *Varanus niloticus* during the second Swiss Expedition to Angola (source Musée d'histoire naturelle de La Chaux-de-Fond).

collected in Angola in 1948. While the most famous result of his Angolan expedition is the adult male elephant still on display in the Göteborg Museum, he also collected a few amphibians and reptiles in Namibe and Huíla provinces that were never published upon. From May 1952 to April 1954, the Zoological Museum of Hamburg promoted the *Hamburgische Angola-Expedition* that explored the provinces of Kwanza Norte, Kwanza Sul, Huambo, Benguela, Huíla, Namibe and Cunene and produced a large number of herpetological specimens, collected mostly by Gustav Adolf von Maydell (1919–1959) and Dr. Schönfeldt. This collection was described by the German Herpetologist Walter Hellmich (1906–1974) (Hellmich and Schmelcher 1956; Hellmich 1957a,b) and included the type material of *Agama agama mucosoensis* and *Gerrhosaurus nigrolineatus ahlefeldti*. The material is currently deposited in Munich and Hamburg. Werner Ladiges (1910–1984) led the Angola Expedition of the Zoological Museum of Hamburg in 1959, but his herpetological collections were never subsequently studied. Gert Hermann Heinrich (1896–1984) led the Conover Angola Expedition sponsored by the Chicago Natural History Museum (Field Museum), which explored many areas in Angola (Zaire, Luanda, Malanje, Kwanza Norte, Kwanza Sul, Huambo, Benguela, Huíla, Namibe, Lunda Norte and Lunda Sul provinces) from 1953 to 1955. A total of 560 herpetological specimens were collected, but with the exception of some lacertids studied by Hymen Marx (1925–2007) and used to describe the Mount Moco endemic *Ichnotropis microlepidota* in 1956 (Marx 1956), the rest of the collection was not intensely studied and remains at FMNH.

As part of the political project for the scientific study of the colonies, the Portuguese *Junta das Missões Geográficas e de Investigações Coloniais* (created by decree in 1936, later renamed *Junta de Investigações do Ultramar*, and from 1973 onwards *Junta de Investigações Científicas do Ultramar*) promoted extensive multidisciplinary surveys to all of the Portuguese overseas territories. Under the Junta, the responsibility for zoological studies was given to the *Centro de Zoologia de Lisboa* (CZL) that was led by the Portuguese zoologist Fernando Frade (1898–1983; Fig. 24), who from 1957–1959 conducted several field surveys in Angola related to colonial apicultural studies, especially in Moxico Province. During these surveys, Frade made a considerable collection of amphibians and reptiles (more than 600 specimens) that were partly studied by Manaças (1963, 1973) and Ruas (2002). This collection, recently relocated to the Museu Nacional de História Natural e da Ciência (former Museu Bocage) in Lisbon, is currently being restudied since many specimens were never cited and represent important range extensions to known distributions. Another contribution to the Angolan herpetofauna are the collections by António Armandinho Themido (1891–1960) from the University of Coimbra. He catalogued the small African herpetological collections of the Zoological Museum of the University of Coimbra, which included some Angolan specimens such as duplicates sent to Coimbra by Bocage, as well as few new records based on the collection donated to the museum by Manuel Paulino de Oliveira (1837–1899), the former curator of Coimbra Museum (Themido 1941).



FIGURE 24. Fernando Frade, during fieldwork in Guinea Bissau (source Instituto de Investigação Científica Tropical).

African institutions and naturalists, especially South Africans, also contributed important knowledge of Angolan herpetofauna prior to the country's independence. During the Harvard Peabody Museum's expedition in September 1951, the Transvaal Museum entomologist Charles Koch (1904–1970) collected specimens of *Gerrhosaurus skoogi* Anderson, 1916 from the desert areas of Namibe Province, which the south-African herpetologist Vivian FitzSimons (1901–1975) used in his study that erected a new genus *Angolosaurus* (FitzSimons 1959; now again considered as *Gerrhosaurus*). Other examples of collectors in Angola include Cornelius G. Coetzee (born 1931), from the State Museum (now National Museum of Namibia) in Windhoek, who collected in 1969–1974, and Wulf Haacke (born 1936), from the Transvaal Museum (now Ditsong National Museum of Natural History), who made important collections in Malanje, Kwanza Norte, Kwanza Sul, Benguela, Huíla, and Namibe provinces. Besides two papers by Haacke (1997, 2008) that covered part of his collections, the remaining collections are still unpublished and are deposited in the Ditsong Museum in Pretoria and in the National Museum of Namibia of Windhoek, Namibia. Despite some important contributions to the study of other animals groups, such as birds and mammals, Angolan institutions, such as the Instituto de Investigação Científica de Angola (IICA) in Sá da Bandeira (now Lubango), the Museu de História Natural de Luanda (MHNL) and the Instituto Universitário de Angola (IUA), both in Luanda, were never dedicated to the study of the country's herpetofauna. The Biology Laboratory of the Museu do Dundo (MD) in Dundo, Lunda Norte Province was funded and managed by the now defunct diamond company DIAMANG and represented a clear exception. Directed by the Portuguese entomologist António Barros de Machado (1912–2002; Fig. 25), the laboratory promoted an extraordinary plan for the study of the natural history of the “Lundas” (Lunda Norte and Lunda Sul provinces) as well as contributing to the study of other areas in Angola. While the staff studied some plant and animal groups, visiting and/or foreign naturalists studied others such as the amphibians and reptiles. The majority of herpetological material collected by the MD team was sent to the Belgian herpetologist Raymond F. Laurent (1917–2005). Laurent published three important papers based on the material sent to him by Barros Machado. The first two were exclusively related to material from the “Lundas” (Laurent 1950a, 1954a), whereas the third included material from southwestern Angola (Benguela, Namibe and Huíla provinces). Based on these three works, Laurent added a total of 72 new herpetological taxa for Angola, of which 22 were new to science. The majority of these collections were returned to MD after Laurent's studies where they remain mostly intact (Ceríaco and Bauer in prep.). However, some duplicate material cited in the first two papers remained in the Royal Museum for Central Africa (MRCA) in Tervuren, Belgium, and duplicate material cited in the third paper remained in the Museum of Comparative Zoology (MCZ) at Harvard University, Cambridge, USA. Part of the snake collection was later studied by Thys van den Audenaerde (1966).



FIGURE 25. Barros Machado collecting biological material in Lunda Norte Province (source Museu do Dundo).

Political and social stability in Angola started to degrade in 1961 when occasional but violent attacks by guerrillas initiated a war of liberation from Portugal. The war lasted for almost 13 years

and ended only in 1974 after a military coup in Lisbon put an end to the ruling regime. Only then were negotiations initiated for the decolonization and independence of Angola, with Angola becoming independent in November 1975 after nearly 500 years of Portuguese control. Immediately after independence, however, a violent civil war erupted that lasted until 2002; this war is divided into three main periods — 1975 to 1991, 1992 to 1994, and 1998 to 2002 — separated by brief and precarious peace agreements. The initial part of the conflict that occurred during the middle of the Cold War involved direct participation of local factions, the South African Armed Forces, the Cuban Armed Forces, and international mercenaries, as well as the indirect support of both the United States of America and the Soviet Union to the different competing factions. Given the growing violence and danger, field research in Angola stalled. Most studies related to the Angolan herpetofauna published in the years preceding and after the independence were based on previous collections. Broadley and Gans (1969) and Horton (1972) published some works on the Angolan herpetofauna, mostly based on specimens loaned from museums or sent by individual researchers. Gans (1976) described three new species of amphisbaenians — *Monopeltis luandae*, *Monopeltis perplexus*, and *Dalophia angolensis* — based on specimens from the AMNH, the Smithsonian Institution, the CZL and the MHNC. Jean-Luc Perret (1976) published the amphibian type catalog of Museu Bocage, Lisbon, noting several amphibian type specimens from Angola. Miguel Cei (1977) published a checklist and identification key of the amphibians of Angola, mostly based on the collections of Museu Bocage. Last, Manaças (1982) published a paper on the venomous snakes of former Portuguese overseas territories, which included new localities for several species in Angola, and Ruas (1996, 2002) published on the frogs collected by Frade in Angola.

Due to the strong political ties between Angola and the Soviet Bloc in the first years after independence, teams from the German Democratic Republic (GDR) travelled to Angola as part of bilateral relationships. This provided the opportunity for Rainer Günther (born 1941) from the Museum für Naturkunde Berlin (ZMB; at that time in East Berlin) to collect in Angola between 1981 and 1983. These small collections were not later published on, though they remain in the ZMB collections. C. J. McCartney made the other collecting episode during the war, however in a very different context. As part of the South African Armed forces during the conflict in the Cuito-Cuanavale area (Cuando Cubango Province) in March/April 1988, McCartney collected a few reptile specimens that were later deposited in the collections of the Port Elizabeth Museum (PEM) in South Africa, and published on by Branch and McCartney (1992).

The end of the civil war in 2002 and the political stabilization of the country led to the rebirth of biodiversity surveys in the country. Since then, field research conducted by different teams has led to the descriptions of new species, the discovery of taxa previously unknown to the country, and expanded knowledge on the diversity and distribution of the Angolan herpetofauna. This current trend shows no sign of abating, and there are many new activities, partnerships, and projects continue being initiated. We provide a short list of some of the main recent or current projects related to Angolan herpetology, although we recognize that this list may not be complete. Possibly the first herpetological collection made since the end of the war was based on the environmental impact assessment (EIA) made for the construction of the Capanda Dam in Malanje Province. From January to April 2003, a team composed of researchers from the Museu Nacional de História Natural de Luanda (MNHNL), the Gabinete de Aproveitamento do Médio Kwanza (GAMEK), and several EIA technicians, collected material in the area later flooded by the filling of the dam. Those specimens were deposited in the collections of the MNHNL and studied and published by Ceriaco et al. (2014b), resulting in considerable range extensions for several species, including a possible record of *Kassina maculosa* for Angola. Ongoing EIAs in the construction of the Laúca Dam, in the vicinity of Capanda, are expected to produce similar discoveries.

As a part of the national plan to promote biodiversity research and conservation, the Ministry of Environment (MinAmb) in Angola in the late 2000s started to promote and organize biodiversity assessments in different regions. In 2009, MinAmb in collaboration with the South African National Biodiversity Institute (SANBI) organized a multidisciplinary expedition to Huíla and Namibe provinces. While the majority of the results of this expedition remain unpublished, the material collected allowed the description of one new species of amphibian, *Hyperolius chelaensis* by Conradie et al. (2012a), and two new species of lizard, *Pedioplanis haackei* and *Pedioplanis huntleyi* by Conradie et al. (2012b). In the continuation of this project, MinAmb in collaboration with international partners conducted a rapid biodiversity assessment in April and May, 2011 to the area near Lagoa Carumbo (near Dundo) in Lunda Norte Province. The herpetological results of this assessment were published by Conradie et al. (2013), who described *Hyperolius raymondi*, and by Branch and Conradie (2015) who provided the first new records from this area since those from Laurent (1950a, 1954a, 1964a). The latter also included the first confirmed record of *Naja (Boulengerina) annulata* for Angola.

Networking between national and international institutions has allowed the further increase of research activities in the country over the past decade. In 2013, a team from the Senckenberg Natural History Museum in Dresden, Germany participated in a multidisciplinary joint survey with the Universidade Kimpa Vita to Serra Pingano, Uíge Province. This resulted in the first record of the anuran genus *Trichobatrachus* for Angola (Ernst et al. 2014). Other novelties await description and publication. As a part of a transnational survey of the Okavango Basin funded by National Geographic Society, the Okavango Wilderness Project (OWP) has been actively surveying the biodiversity of the Cuando, Cuito, and Cubango river basins in Bié, Cuando Cubango, and Moxico provinces since 2012 (Branch 2018). The herpetological results of the different surveys made from 2012–2015 were published by Conradie et al. (2016), which considerably expanded the known distribution of several amphibian and reptile taxa in Angola. In addition, they added new records for species previously unknown for Angola, including *Causus* cf. *rasmusseni* Broadley, 2014, *Acontias kgalagadi kgalagadi* Lamb, Biswas and Bauer, 2010, and *Panaspis maculicollis* Jacobsen and Broadley 2000. A field report about part of the OWP herpetological research was recently published by Branch (2018).

Since 2013, the Instituto Nacional da Biodiversidade e Áreas de Conservação (INBAC) in Angola and the aforementioned international partner institutions have conducted herpetological surveys in Iona National Park and Namibe Province in November/December 2013 (results published by Ceriaco et al. 2016a and Stanley et al. 2016; Fig. 26), Cangandala National Park, Malanje Province in September/October 2015 (results partly published in Ceriaco et al. 2016b), Kwanza Sul and Benguela provinces in November/December 2015 (results in prepa-



FIGURE 26. Tissue sampling (Suzana Bandeira, at rear) and specimen fixing (Luis Ceriaco) in the field laboratory established in N'Dolondolo during 2016 INBAC/VU expedition to Serra da Neve, Namibe Province (Photo by Ishan Agarwal).

ration), Quiçama National Park, Luanda Province, in June/July 2016 (results in preparation), Serra da Neve and parts of Namibe Province in November/December 2016 (results in preparation), Bicular National Park and parts of Huíla Province in July/August 2017 (result in preparation), Kalandula falls and Pungo Andongo in Malanje province in December 2017 (results in preparation), Mount Moco (Huambo Province) and Bicular National Park (Huíla Province), in March/April 2018 (results in preparation). As a result of this joint project, one new species was already described, *Cordylus namakuiyus* by Stanley et al. (2016), and *Tomopterna damarensis* Dawood and Channing, 2002 was first recorded for Angola (Ceríaco et al. 2016a). In addition, several undescribed species and other new discoveries are in the process of being studied, described, and published. This collaborative project aims to resample both historical type localities and previously unstudied areas in Angola. With new collections in hand, we will then use both molecular and morphological tools for addressing important questions in the biogeography and systematics of Angolan amphibians and reptiles. These new efforts will significantly increase the known species diversity of amphibians and reptiles for Angola, result in descriptions of several new species, resolve long-standing taxonomic problems, and contribute to a better knowledge of the distribution of herpetofauna that can inform conservation management priorities and decisions. While all of this work is related to the herpetological diversity of Angola, it also has direct bearing on the understanding the diversity and distribution of species in all of the neighboring countries in central and southern Africa.

Besides recent field research, a growing interest in the country's rich but still poorly known herpetofauna has resulted in a considerable number of other activities. Included among these are the reviews by Ruas (2002) on the amphibians collected by Fernando Frade in Angola between 1957 and 1959, based on the collections of the Instituto de Investigação Científica Tropical (IICT, formerly CZL); the publication of a field guide for the amphibians of Central Africa and Angola by Frétey et al. (2011); the publication of the type catalogue of amphibians and reptiles of the Museu Nacional de História Natural da Universidade do Porto by Ceríaco et al. (2014a), focusing particularly the material collected by Francisco Newton and published by Ferreira (1904, 1906); the creation of a snake venom research center in Malanje (CIMETOX), which has started to contribute to knowledge on the distribution of Angolan venomous snakes (Oliveira et al. 2016; Oliveira 2017); and finally the ongoing Florida Museum of Natural History, Villanova University and University of Michigan Dearborn project funded by JRS Biodiversity Foundation, to locate, review, digitize, georeference and disseminate through online databases, such as GBIF and VertNet, all the available data on

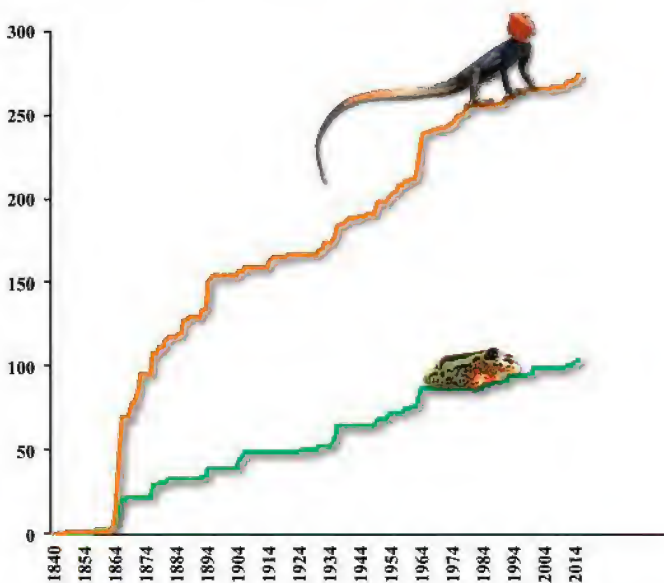


FIGURE 27. Dynamics of the knowledge, addition, description and discovery of herpetological taxa in Angola. We considered the first citation of each species for Angola as an addition.

herpetological specimens from Angola (and Namibia) scattered throughout world museums.

As is evident in the above paragraphs, reports of amphibian and reptile taxa for Angola have been sporadic through time. This has resulted in an increase (and occasionally decrease due to the removal of erroneous taxa from the national list – see taxonomic accounts and Appendix Table A2) in the number of herpetological taxa added for the country, as summarized in Fig. 27. Approximately half of the reports of taxa that were new to science and/or previously unknown for the country were made during the second half of the nineteenth century, especially through the works of Bocage, Günther, Gray, Boulenger and Peters. From 1900 to 2000, the number of known amphibian and reptile species for Angola almost doubled, as a result of the contributions of international expeditions, such as that of Monard, the Vernay Expedition, the Pulitzer Expedition, as well as the extremely important contributions made by Laurent based on the study of the Museu Dundo collections. The major slowdown in the discovery of new taxa or new occurrences for the country was the civil war. The effect of the war on the herpetological study of Angola is reflected in the limited increase of known species diversity during 1975–2002. However, since the restoration of peace, a higher pace of discovery is resuming with five new amphibian species (including the description of two new endemic species) and nine new reptile species (including the description of three new endemic species) being added recently. It is expected that these numbers will should increase significantly in the coming years.

DIVERSITY, DISTRIBUTION AND ENDEMISM

Thirteen families of amphibians comprising 25 different genera, all anurans, occur in Angola. Of these, the Hyperoliidae, Ptychadenidae, Bufonidae, and Arthroleptidae are the most diverse in the country (Table 1). These four families comprise almost three fourths of the amphibian taxa known for Angola. The remaining amphibian diversity is distributed across the families Pyxicephalidae, Pipidae, Phrynobatrachidae, Ranidae, Microhylidae, Dicroglossidae, Brevicipitidae, Hemisotidae, and Rhacophoridae (Table 1).

The reptiles (excluding marine turtles), comprising chelonians, crocodilians, lizards and snakes represent 22 families and 101 genera. Turtles are divided into the families Pelomedusidae, Trionychidae, and Testudinidae and all three crocodilians belong to the family Crocodylidae (Table 1). Among the squamates, the Lamprophiidae and Scincidae are the most species-rich families in Angola, with collectively more than one third of all the squamate species (Table 1). The families Gekkonidae, Colubridae, Lacertidae, Elapidae, Amphisbaenidae, and Viperidae then follow (Table 1). The remaining families, Gerrhosauridae, Chamaleonidae, Typhlopidae, Agamidae, Cordylidae, Leptotyphlopidae, Natricidae, Pythonidae, Varanidae, and Boidae, cumulatively have less than one third of the remaining squamate species (Table 1).

Comparing the diversity of the Angolan herpetofauna with that of the surrounding countries, Angola is one of the richest in terms of both amphibian and reptile diversity, as well in terms of endemics (Table 2). For amphibians, Angola is only surpassed by the Democratic Republic of the Congo and South Africa. Angola has a higher number of amphibians than either the Republic of the Congo or Zambia, but the more significant contrast between Angola and these two countries is Angola's percentage of endemic amphibians — 15% against 5% for the Republic of the Congo and 2% for Zambia. Not surprisingly, Angola has almost twice as many amphibian species as the neighboring and largely xeric Namibia, and almost four times more than Botswana. For reptiles, South Africa has the highest number of species for any country in Africa, with 421 species, of which 45% are endemics, followed by Tanzania (357) and the Democratic Republic of the Congo (373), but Angola ranks among the top countries in Africa in terms of total reptile taxa. However, given the

TABLE 1. Diversity of genera, species/subspecies and endemic species/subspecies of amphibians and reptiles (excluding marine turtles) from Angola by family. Numbers solely based on the taxa with confirmed presence in the country and present herein in the taxonomic accounts.

Family	Genus	Species/Subspecies	Endemics
AMPHIBIA			
Anura			
Pipidae	1	6	0
Bufo	4	14	1
Microhylidae	1	3	0
Brevicipitidae	1	2	0
Hemisotidae	1	2	0
Hyperoliidae	4	37	10
Arthroleptidae	3	14	4
Ptychadenidae	2	17	1
Phrynobatrachidae	1	7	1
Pyxicephalidae	4	8	0
Dicroglossidae	1	1	0
Ranidae	1	5	1
Rhacophoridae	1	1	0
Anurans TOTAL:	25	117	18
Reptilia			
Chelononia			
Pelomedusidae	2	7	0
Trionychidae	2	2	0
Testudinidae	2	4	0
Turtles TOTAL:	6	13	0
Crocodylia			
Crocodylidae	3	3	0
Crocodylians TOTAL:	3	3	0
Squamata – Lacertilia			
Gekkonidae	8	34	9
Amphisbaenidae	3	11	3
Lacertidae	6	15	6
Cordylidae	2	5	2
Gerrhosauridae	4	8	1
Scincidae	12	44	5
Varanidae	1	3	0
Chamaeleonidae	2	5	0
Agamidae	2	9	3
Squamata – Lizards TOTAL:	50	134	29
Squamata – Serpentes			
Typhlopidae	2	7	1
Leptotyphlopidae	2	5	1
Pythonidae	1	3	0
Boidae	1	1	0
Viperidae	3	12	1
Lamprophiidae	19	47	4
Elapidae	5	15	0
Colubridae	17	34	0
Natricidae*	2	4	0
Squamata – Serpentes TOTAL:	52	128	7
Reptiles TOTAL:	101	278	36
TOTAL	126	395	54
* Recognition of Natricidae at the family level does not follow Pyron et al. (2013).			

lack of surveys in many areas of the country, it is expected that the known diversity of both amphibians and reptiles will increase in the future as new expeditions are carried out. In addition, many species occurring in bordering areas of the surrounding countries are expected to occur in the country (for species known to occur in the vicinity of the Angolan border and potentially occurring inside the country see, for example, Broadley (1991, 1998), Poynton (1998), and Channing (2001)). Further, we are aware of other taxa confirmed from Angola on the basis of unpublished museum records and new collections made by ourselves and colleagues, but as this atlas is limited to species noted in the literature, they have been excluded from this document.

Most species (62% for amphibians, 55% for reptiles) are represented by five or fewer localities in Angola. Few species are known from many localities, with only 9% of the amphibians and 12% of the reptile taxa being represented by more than 20 localities in Angola. A total of 678 unique localities are known to have amphibian and/or reptile records in Angola. The available data are distributed unevenly across the country. As Table 2 and Fig. 28 highlight, there is a lower number of sampled localities in northwestern (Cabinda, Zaire, Bengo, Luanda and Uíge provinces) central eastern (Lunda Sul and Moxico provinces), and southeastern Angola (Cuando Cubango Province), which contrasts with northeastern (Lunda Norte Province), central (Kwanza Norte, Malanje, Bié, Huambo provinces), central coastal (Kwanza Sul Province), and especially the southwestern areas of the country (Benguela, Huíla and Namibe provinces), which are represented by the highest number of sampled localities for both amphibians and reptiles.

The difference in the number of records among provinces is explained by both the historical penetration of colonial power in Angola, as well as by the different contexts of the expeditions that were made to the country. There is good spatial and taxonomic coverage in the western areas of the country, especially Malanje, Benguela, Huíla, and Namibe provinces, which are all areas that had a strong colonial presence and good communication infrastructure, and that have been explored by a number of naturalists and expeditions from the nineteenth century to present day. The northeast provinces of the Lundas, especially Lunda Norte are reasonably well surveyed, especially due to the contributions of the former Biology Laboratory of the Museu do Dundo. Cuando Cubango Province, which was historically neglected, had difficult overland access, and was called by the former Portuguese colonials the “*Terras do fim do mundo*” (the “lands of the end of the world”), now has reasonably good coverage, chiefly due to the expeditions of the Okavango Wilderness

TABLE 2. Comparison between the number of Angolan amphibian and reptile taxa and endemics, with neighboring countries. South Africa is included as it represents both the most biodiverse and well-documented sub-Saharan herpetofauna. Data for non-Angolan amphibians from amphibiaweb.com; data for reptiles from Uri Roll, Shai Meiri and the Global Assessment of Reptile Distributions (GARD) Initiative (<http://www.gardinitiative.org/>) and Bates et al. 2014 (South Africa only). Angolan data based on full species with confirmed presence in the country and present in the taxonomic accounts.

	Angola	Democratic Republic of the Congo	Republic of the Congo	Zambia	Botswana	Namibia	South Africa
Amphibian species	117	225	75	87	36	60	129
Endemic (%)	18 (15%)	59 (26%)	4 (5%)	2 (2%)	0 (0%)	3 (5%)	64 (51%)
Reptile species	278	373	197	226	171	268	421
Endemic (%)	33 (12%)	22 (5%)	0 (0%)	3 (1%)	1(0.5%)	48 (18%)	190 (45%)
Total species	395	598	272	313	207	328	550
Total endemics (%)	51 (13%)	81 (14%)	4 (1.4%)	5 (1.6%)	1 (0.5%)	51 (16%)	254 (54%)

Project. For Moxico Province the majority of available data derives from the collections made by Fernando Frade and published by Sara Manaças, as well as some material studied by Laurent from the Museu do Dundo collections. However, as shown by Table 3, other northern provinces have been historically neglected.

Despite the evident incompleteness of distributional data for amphibians and reptiles, this atlas

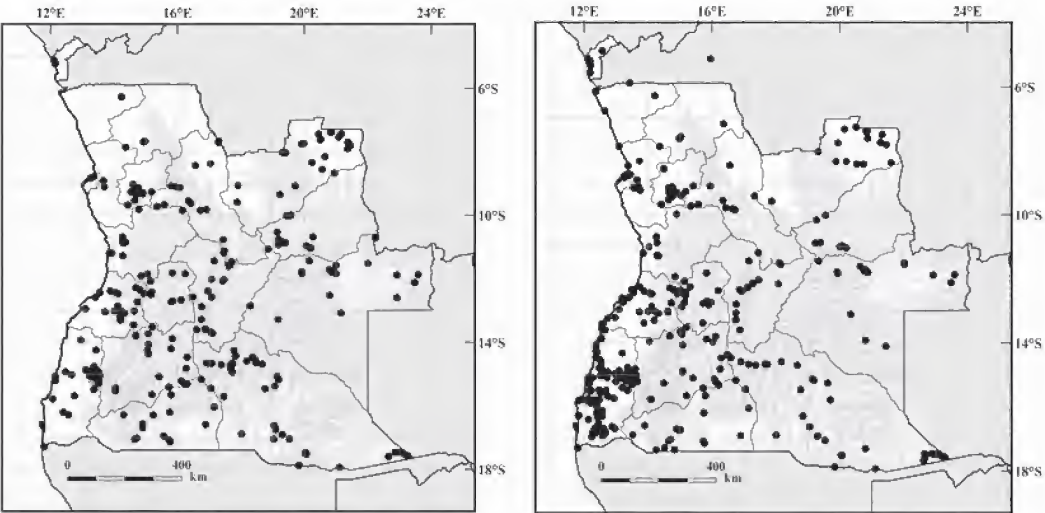


FIGURE 28. Localities from which Angolan amphibians (left) and reptiles (right) have been recorded in the published literature.

TABLE 3. Distribution of terrestrial amphibian and reptile taxa (species and subspecies) and records by Angolan province. Numbers based solely on taxa with confirmed presence in the country and covered in the taxonomic accounts herein.

	Amphibian taxa	Amphibian records	Reptile taxa	Reptile records	Total Taxa	Total records
Cabinda	14	18	60	102	74	120
Zaire	6	6	28	30	34	36
Uíge	6	11	7	6	13	17
Bengo	7	7	26	36	33	43
Luanda	6	7	33	40	39	47
Kwanza Norte	29	43	62	170	91	213
Kwanza Sul	19	30	52	75	71	105
Malanje	35	69	69	128	104	197
Lunda Norte	40	99	79	172	119	271
Lunda Sul	31	77	44	69	75	146
Moxico	36	71	52	99	88	170
Bié	25	56	39	70	64	126
Huambo	18	36	57	103	75	139
Benguela	36	97	102	355	138	452
Namibe	14	26	94	345	108	371
Huíla	36	115	102	283	137	398
Cunene	17	29	56	90	73	119
Cuando Cubango	35	183	59	128	94	311
Total	117	980	288	2301	395	3281

presents an important update. In their gazetteer of terrestrial vertebrate collecting localities in Angola Crawford-Cabral and Mesquitela (1989) provided the first multi-taxa attempt to summarize the history of biodiversity discovery and distribution of Angolan terrestrial vertebrates. They mapped 54 “loci” [= localities transformed into quarter degree squares] for amphibian and/or reptile type material. However, they did not provide cumulative maps of all Angolan records of amphibians and reptiles. In contrast, we present 663 unique localities associated with herpetofaunal records in the country, plotted as point localities.

Seventeen amphibian taxa, representing approximately 15% of the total amphibian diversity in Angola, are endemic to Angola – *Poyntonophrynus grandisonae* (family Bufonidae); *Hyperolius bicolor*, *Hyperolius chelaensis*, *Hyperolius cinereus*, *Hyperolius fuscigula*, *Hyperolius gularis*, *Hyperolius maestus*, *Hyperolius protchei*, *Hyperolius raymondi*, *Hyperolius rhizophilus* and *Hyperolius vilhenai* (family Hyperoliidae); *Arthroleptis carquejai*, *Leptopelis angolensis*, *Leptopelis jordani*, and *Leptopelis marginatus* (family Arthroleptidae); *Hildebrandtia ornatissima* (family Ptychadenidae); *Phrynobatrachus brevipalmatus* (family Phrynobatrachidae); and *Amnirana parkeriana* (family Ranidae).

Reptile endemism is proportionally somewhat lower than amphibian endemism, with 36 taxa endemic for the country, representing approximately 12% of total diversity. No crocodilians nor chelonians are exclusive to Angola. A total of 27 lizards (species and subspecies) have so far only been found in Angola. These are divided between the families Scincidae (*Eumecia anchietae major*, *Sepsina copei*, *Trachylepis monardi*, *Typhlacontias punctatissimus bogerti*, *Typhlacontias rudebecki*), Gekkonidae (*Afrogecko ansorgii*, *Hemidactylus bayonii*, *Hemidactylus benguellensis*, *Kolekanos plumicaudus*, *Pachydactylus angolensis*, *Rhoptropus benguellensis*, *Rhoptropus montanus*, *Rhoptropus taeniosictus*), Amphisbaenidae (*Monopeltis luandae*, *Monopeltis perplexus*, *Monopeltis welwitschii*), Lacertidae (*Ichnotropis capensis overlaeti*, *Ichnotropis microlepidota*, *Nucras scalaris*, *Pedioplanis haackei*, *Pedioplanis huntleyi*), Gerrhosauridae (*Gerrhosaurus multilineatus*), Agamidae (*Agama mucosoensis*), and Cordylidae (*Cordylus angolensis*, *Cordylus namakuius*). The monotypic gekkonid genus *Kolekanos*, from southern Angola (Namibe Province) is endemic to Angola. The number of known endemic snakes is one quarter that of lizards, with only six species and one subspecies endemic to the country. These are distributed across the families Typhlopidae (*Afrotyphlops anomalus*), Leptotyphlopidae (*Namibiana rostrata*), Viperidae (*Bitis heraldica*), and Lamprophiidae (*Boaedon angolensis*, *Boaedon variegatum*, *Psammophis ansorgii* and *Psammophylax rhombeatus ocellatus*).

Endemic species occur mainly in five different areas (Fig. 29) – in the coastal lowlands of the southwestern Angola (Namibie and Benguela provinces), in the escarpment highlands (Kwanza Norte, Kwanza Sul, Huambo, Benguela and Huíla provinces), in the Angolan plateau (Lunda Sul, Bié, Huambo and Huíla provinces), in the Southern Congolian Savannah mosaic lowlands of Lunda Norte, and finally across the Kwanza River Basin, mainly from Malanje to Luanda.

As noted above, Angola lies at the crossroads of different biogeographic regions. According to Linder et al. (2012) the country extends from the Congolian region in the north to the Zambezi region in the center and southeast, and the Southern African region in the southwest. This broad biogeographic division is particularly interesting, and a similar scheme has been accepted, though with some degree of personal interpretation, by many authors who focused on the biogeography of the Angola herpetofauna. Bocage (1895a) was the first to propose two main biogeographic zones in Angola — a northern region and a southern region — with the Kwanza River being the main division between them. Within these two main regions, Bocage (1895a) proposed a subsequent division — the coastal zone, the intermediate zone, and finally the high plateau zone (Table 4). Despite the limited data (in terms of diversity and distribution of the Angolan herpetofauna, as well

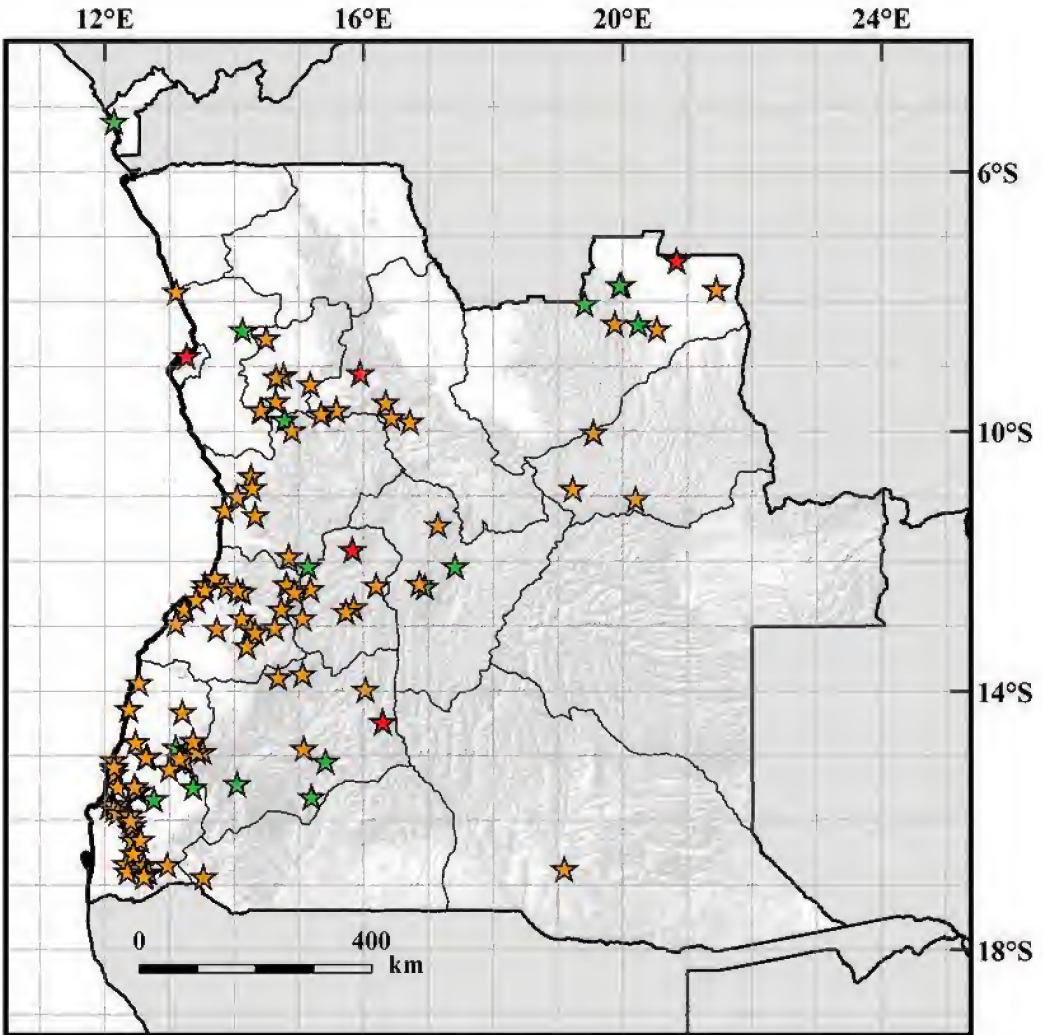


FIGURE 29. Map with localities where endemic species occur in Angola. Orange stars represent localities where endemic reptile species occur, green stars represent localities where amphibian endemics occur, red stars represent localities where both amphibian and reptile endemics have been recorded.

as basic geographic information) available to Bocage, his zoogeographic interpretation of Angola has been accepted, even if updated and refined by subsequent authors. Monard (1937b) classified the diversity of reptiles occurring in Angola into six groups — the “pelagic reptiles” (marine turtles), the “paraethiopian reptiles,” further divided into “reptiles with extra-ethiopian geographic distribution” (all species occurring in the “Ethiopian” region, plus other regions of Africa and even other continents), and “panethiopian or generalized ethiopian” (all species with broad sub-Saharan distributions), the “tropical and western region reptiles,” the “austral and eastern region reptiles,” and finally an endemic “Angola reptiles” group. While the pelagic and the paraethiopian reptiles lack any biogeographic signal, the latter groups followed the main northern-southern separation proposed by Bocage — with the “tropical and western region reptiles” being confined to the northern areas of the country, and the “austral and eastern region reptiles” to southern areas, although

noting that some species of these two groups were found in both areas and the turnover, instead of being abrupt was gradual, with southern taxa “diluting” towards the north, and some northern taxa extending considerably south. As an update to Bocage’s separation, Monard (1937b) proposed, however, that the border or turnover area would be a little bit north of the Kwanza (Table 4). He also recognized an Angolan endemic zone, roughly limited on the north by the Kwanza (Table 4). In the case of the amphibians, Monard (1938) provided a less detailed account, noting, however, that similar to the reptiles, the Angolan amphibians could be classified in four main groups — the “paraethiopian,” the “tropical,” the “austral,” and the endemic “Angolan” species (Table 4). Even though these groups exhibited an evident north-south turnover, similar to the reptiles, the boundaries between them were not as clear as those for reptiles and appeared to be more related to drainage basins.

Based on data on birds, especially those of western regions of the country, Hall (1960) highlighted the biogeographic importance of the Escarpment in Angola. For him, the escarpment separated an “*Acacia* Zone” in southwestern Angola and an extensive “*Brachystegia* Zone” in the central area of the country. While the *Brachystegia* zone was mostly dominated by species “occurring in the woodlands of Central and East Africa,” those of the “*Acacia* Zone” belong to “species found in South West Africa, except for a few, typical of the Escarpment Zone, which are found in fertile pockets on the edges of rivers north of Benguela, and in marshes and cultivation behind Benguela and Catumbela.” The “Escarpment Zone” divided Angolan birds in three main groups: those “with a representative form in the Escarpment Zone, and in either, or both, of the other zones,” those “with representative forms in the *Brachystegia* and *Acacia* Zones, partly isolated from each other by the Escarpment Zone”; and finally those “endemic, or nearly endemic, to the Escarpment Zone.” Hall (1960) argues that the Escarpment has worked as both a refugium and a barrier during past climate fluctuations, not only giving origin to Escarpment endemic forms, but also promoting separation of once single populations. The biogeographic importance of the Angolan Escarpment has been unanimously recognized by most authors concerned with Angola biogeography (e.g., Traylor 1963; Huntley 1974; Crawford-Cabral 1991; Huntley and Matos 1994; Dean 2000, 2001; Mills 2010; Clarke et al. 2011; Gonçalves and Goyder 2016), and new species of endemic mammals have been described from the area (Carleton et al. 2015; Svensson et al. 2017).

Frade (1963) reviewed the available data on the biogeography of Angolan vertebrates, and proposed some modifications to both Bocage’s and Monard’s interpretations (Table 4). For reptiles he proposed the division of Angola into three main subregions, each one with specific “zones” — The “Western subregion,” comprising the north of the country and with a specific zone in “Cabin-da”; the “Plateaus subregion,” divided into the “Angolan plateau” and “Zambeian plateau” zones; and an “Arid subregion” without further divisions. For amphibians, the division was among two subregion and two zones, without any evident hierarchy between them — the “Western subregion and Angolan plateau zone,” mainly delimited by the “Angolan or coastal hydrographic basins,” the “Congo basin zone,” the “Zambeian plateau zone,” and the “Arid subregion” (Table 4). Despite the zoogeographic importance attributed by Hall (1960) to the Escarpment, Frade did not extend Hall’s suggestions to other groups, including amphibians and reptiles. Frade (1963) was the last author to comment specifically upon and propose zoogeographic divisions to the Angolan herpetofauna.

Following Frade’s revisionary work, few studies were dedicated to analyzing Angola zoogeography in a comprehensive way. One of greatest importance and comprehensiveness was that of Crawford-Cabral (1991), an unpublished document focused on a research plan for Angolan zoogeography, including a reproduction of an addendum to the author’s 1982 (also unpublished) PhD thesis, focused on the Zoogeography of Angolan mammals. Based on extensive data collec-

TABLE 4. Comparison between the zoogeographic regions for amphibians and reptiles in Angola proposed by Bocage (1895), Monard (1937a, 1938), Frade (1963), Crawford-Cabral (1991) and this study.

Bocage (1895)	Monard (1937a)	Monard (1938)	Frade (1963)	Crawford-Cabral (1991)			This study	
Northern region	Tropical and western region reptiles	Tropical	<i>Reptiles:</i> Cabinda Zone	Western (or Guinean) Sub-region	Cabinda sector	Mayombe zone	Northern zone	Cabinda enclave area
						Coastal zones		
					Escarpment and Angola's Northeast sector	Congo sub planaltic zone		Southern-Con-golese plains area
						Escarpment zone		Escarpment area
						Northeastern coast zone		-
			Northeastern Angola sector		Cuango-Casai area	Angolan-Katan-gan area		
			Southern region		Angolan endemic zone	Angolan		Zambezeian plateau zone
Austral	Zambezi peneplains	Zambezi peneplains zone						
Austral and eastern region		Arid subregion		Southwestern Africa Arid district	Dry Mutiati [Mopane] woodlands of southwestern Angola zone	Dry Mutiati [Mopane] woodlands of southwestern Angola zone		
					Namibe desert and subdesert zones	Subdesert zone		
					-	Namibe true desert zone		
					Coastal zone			

tion and almost 15 years of field experience in the country, Crawford-Cabral (1991) reviewed the different proposed biogeographic divisions of the country, and proposed a new map and divisions based on mammal data. He agreed with the main “north-south” division proposed by Bocage, calling Bocage’s “northern” region the “Western (or Guinean) Sub-region,” while the “southern region” was the “South-Eastern (or Sudan-Zambezeian) Sub-region” (Table 4). Both were further divided: the “Western (or Guinean) Sub-region” was divided into the “Cabinda sector,” containing the “Mayombe” and “the coastal” zones; the “Escarpment and Angola’s Northeast sector,” containing the “Congo sub planaltic,” the “escarpment,” and the “northeastern coast” zones; and the “Northeastern Angola sector,” containing the “Cuango-Casai area,” whereas the “South-East-

ern (or Sudan-Zambezian) Sub-region,” was further divided into two main districts — the “Angolan-Rhodesian plateau district,” containing the “Angolan mountains and high plateaus” zone and the “Zambezi peneplains” zones, and the “Southwestern Africa Arid district,” containing both the “Dry Mutiati [Mopane] woodlands of southwestern Angola” and the “Namibe desert and subdesert” zones (Table 4).

We largely accept the general division provided by Crawford-Cabral (1991) and present our own interpretation of Angolan zoogeographic units based on the distributional data in this atlas (a comparison between this and earlier hypotheses is provided in Table 4).

The Northern zone encompasses the north of the country, including the Cabinda enclave, Zaire, Uíge, Kwanza Norte, central and northern Malanje, and Lunda Norte, but extends further south following the Escarpment to Kwanza Sul and Huambo (potentially entering Huíla). This zone also roughly corresponds to the area of the Congo-Casain basins and the coastal rivers north of the Kwanza-River mouth, with the latter, as well as the Zambezi River Basin demarcating its southern limit. This area is dominated by genera and species typical of West and Central Africa, for which Angola represents, in many cases, the southernmost part of their distributions. This northern zone is divided into:

(1) The Cabinda enclave area: Crawford-Cabral (1991) divided the Cabinda sector into two zones — the coastal area and the Mayombe forest. While we assume that this division is “real,” particularly in light of the different biomes present (see Biomes and Vegetation Zones above), we do not have enough data to confirm that this difference exists for amphibians and reptiles. However, it is clear that Cabinda has a distinctive fauna, quite similar to the Republic of the Congo and well embedded in West/Central African lineages. Examples of species found only found there and not present in the “mainland” of Angola are *Hyperolius ocellatus*, *Pelusios gabonensis*, *Cycloderma aubryi*, *Osteolaemus tetraspis*, *Trioceros oweni*, *Calabaria reinhardtii*, and *Grayia caesar*.

(2) The Southern-Congolese plains area extends from Zaire and northern Uíge to northern Malanje (Baixa de Cassanje area). This area is dominated by Western-Congolian Forest Savannah Mosaics at elevations lower than 1000 m. The fauna of these areas is typically Congolese, with most of the species also occurring in the neighboring Republic of Congo and Democratic Republic of the Congo. Some examples of these taxa are *Cryptothylax greshoffii*, *Feylinia grandisquamis*, *Atractaspis irregularis*, and *Xenocalamus mechowii*.

(3) The Escarpment area extends from Uíge, through Kwanza Norte, Kwanza Sul, Huambo, and Bié and terminates in Huíla. It is mostly situated above 1500 m but is variable in elevation, with distinctive areas like the mountains of Calulo, Gabela, and Selles, as well as Mount Moco, the highest peak of Angola. As for birds, the area is rich in endemics, including *Arthroleptis carquejai*, *Leptopelis jordani*, *Leptopelis anchietae*, *Amnirana parkeriana*, *Ichnotropis microlepidota*, and *Rhoptropus benguellensis*. It also provides an avenue for the expansion southwards of West/Central African species, as for example *Trachylepis maculilabris*.

(4) The Angolan-Katanga area, mostly limited to the northeastern areas of Malanje, Lunda Norte, and northern parts of Lunda Sul, is almost totally congruent with the lower elevation areas of northeastern Angola, associated with Southern Congolian Forest-Savannah mosaic and the metaigneous rocks intrusions of the Casai. As a particularly area of interdigitating habitats, alternating from riparian forests to more open savannah habitats, this area supports some taxa that do not occur in other areas of the country and which are most closely associated with northwestern Zambian and the Katanga area of the Democratic Republic of Congo, as well as a considerable number of endemics. *Arthroleptis lameerei*, *Lepidothyris hinkeli joei*, *Ichnotropis overlaeti*, *Afrotyphlops schmidtii*, and *Xenocalamus bicolor machadoi* are examples of these forms.

The Southern zone covers the center and south of the country, incorporating southern Malanje, Bié, Lunda Sul, Moxico, Cuando Cubango, Cunene, Huíla, Namibe and Benguela, but extends further north on the coast. This zone corresponds to the area of all southern river basins and the coastal rivers south of the Kwanza River mouth. This area is dominated by genera and species typical of East and especially Southern Africa, for which their Angolan distribution represents, in many cases, the northern extent of their distributions. This southern zone is divided into:

(1) “Angolan mountains and high plateaus,” a large area, limited by the Escarpment in the west, by the northern limits of the Kwanza River in the north, and by the Zambezi peneplains in the southeast and the Dry Mutiati zone in the south. It is an area situated above 1000 m with a climate different from that of lower elevations near the coast. It is probably the most diverse region in the country, particularly in terms of reptiles. It supports a high number of endemics or near endemics, such as *Hyperolius chelaensis*, *Sepsina angolensis*, *Trachylepis monardi*, *Cordylus angolensis*, and *Bitis heraldica*.

(2) “Zambezi peneplains” dominate the southwest of the country, an area including both the Zambezi and Okavango river basins. This extensively irrigated area has many affinities with Zambia, Botswana and the Caprivi Strip in northeastern Namibia. *Kassina kuvangensis*, *Poyntonophrynus kavangensis*, *Acontias kgalagadi*, *Typhlacontias rhoani*, and *Psammophis jallae* are representative taxa.

(3) “Dry Mutiati [Mopane] woodlands of southwestern Angola” it is roughly coincident with the Kunene and Cuvelai river basins in southern Huíla and Cunene provinces. It is an area of lower elevation, dominated by mopane woodlands, and having a distinct herpetological fauna, as for example *Typhlacontias rohani*, *Dalophia pistillum*, *Monopeltis anchietae*, *Monopeltis infuscata*, *Namibiana rostrata*, *Psammophis subtaeniatus*, *Hildebrandtia ornata*, *Mertensophryne mocquardi*, *Pyxicephalus edulis*, and *Aubria* sp.

(4) The “Namibe true desert zone” encompasses the strip of dune desert in southwestern Namibe Province. This desert, the continuation of the Skeleton Coast in Namibia, is one of the more extreme habitats in Angola, with little vegetation cover and mostly dominated by sand dunes. There are several species known to occur in Angola only in this area, including *Pachydactylus rangei*, *Meroles anchietae*, *Gerrhosaurus skoogi*, and *Bitis peringueyi*.

(5) The “subdesert” zones extends from southern Namibe to Benguela, at low elevations, and has xeric vegetation, similar to that of that of the Kaokoveld in Namibia. It is an important area of endemism, with several unique lineages and even the endemic genus *Kolekanos*. It also has a spectacular diversity of skinks, many of them mostly restricted in Angola to this area. Examples include *Trachylepis punctulata*, *T. hoeschi*, *T. lacertiformis*, *Sepsina copei*, etc., geckos (genera *Chondrodactylus*, *Rhoptropus* and *Pachydactylus*), and lacertids (genus *Pedioplanis*). It is also the habitat for endemic (or near-endemic) frogs including *Poyntonophrynus grandisonae*, *Tomopterna damarensis*, and *Phrynomantis affinis*.

(6) A coastal zone, that follows from the subdesert zone towards the north, the limits of which are hard to establish. It can be argued that this coastal zone, mostly sandy and dominated by *Acacia sensu lato* and *Euphorbia* species, functions as an invasive strip of the southern zone into the north, parallel to the role of the Escarpment as a corridor for northern taxa. It accounts for the prevalence of southern taxa at even low latitudes along the coast, as in *Chondrodactylus pulitzeriae*, *Trachylepis acutilabris*, *Varanus albigularis angolensis*, or *Breviceps* sp. This “coastal zone” may penetrate further inland at the Kwanza River area in Quiçama National Park.

The boundaries of the above-proposed regions are, of course, permeable. There are currently several examples that illustrate that lineages typical of one or another biogeographic region, have

been able to expand and diversify in neighboring regions. The recently described southern Angolan endemic *Cordylus namakuiyus* is a good example of these “exchanges.” Together with *C. machadoi*, its sister species, *C. namakuiyus* occurs in the “Southern Africa” region *sensu* Linder et al. (2012) (Stanley et al. 2016). However, *C. machadoi* is restricted to the highlands of southern Angola and the northern Namibia escarpment, in what could be considered as the “Angolan mountains and high plateaus” zone of the “Angolan-Rhodesian plateau district” *sensu* Crawford-Cabral (1991), whereas *C. namakuiyus* only occurs in the lowlands of the “Namibe desert and subdesert” zone. Another similar example, already explored above, is that of the Namib Day Geckos of the genus *Rhoptropus*, in which the majority of species occur in the “Namibe desert and subdesert,” but two taxa have their distributions in the “Angolan mountains and high plateaus” zone (*R. montanus*) and the “Escarpment” zone (*R. benguellensis*).

There are several examples of the so-called paraethiopian amphibians and reptiles identified by Monard (1937b, 1938), e.g., *Bitis arietans*, *Varanus niloticus*, and *Crocodylus niloticus*. However, recently published and ongoing large-scale phylogeographic studies are starting to deconstruct some of these widely distributed taxa, revealing that they comprise numerous cryptic species, each with much more modest distributional ranges that can hardly be considered paraethiopian or even panethiopian. This is for example the case of *Ptychadena mascareniensis*, the same example used by Monard (1938) as a panethiopian amphibian species. This species complex was recently studied by Zimkus et al. (2017), who showed that the Angolan population is one of several different lineages contained in the complex. This is also true for reptile species such as *Hemidactylus mabouia*, which is currently under study. Preliminary results shows that it is a complex of several different lineages with still large, but considerably more restricted distribution ranges (Ishan Agarwal, pers. comm.).

Recent modeling and statistical approaches to Angolan zoogeography have produced interesting, if limited, insights. Solely based on the data for ungulates compiled by Crawford-Cabral in a series of past publications, Rodrigues et al. (2015) were able to retrieve four main biogeographic regions for the country: 1) a northern Angola “Zaire-Lunda-Cuanza” region, encompassing the blend of humid evergreen and semi-deciduous forests, woodlands, shrublands and grasslands characterizing the Western Congolian forest-savanna mosaic, and including most of the Angolan scarp savannas and woodlands, as well as containing the northern parts of the deciduous broadleaf savannas and woodlands of the Angolan Miombo woodlands; 2) a “Central Plateau” area that intergrades with the previous region in a north-south gradient, corresponding roughly to the south and south eastern parts of the Angolan plateau, particularly dominated by the Angolan Miombo woodlands, and related to a more broad Zambezian region; 3) a southern “Cunene - Cuando-Cubango” region, comprising most of southern areas of the country with the exception of the Namibe area in the southwest, and corresponding to the northern limit of the Kalahari sub-region, and dominated by Zambezian Baikiaea woodlands and Angolan mopane woodlands; and finally 4) a “Namibe” region comprising the southwestern, low elevation areas of the country, deeply embedded in the Southern Africa Kaokoveld desert area, dominated by the Namibe Desert and the Namibian savanna woodlands. These four regions can potentially be assigned to some of the divisions proposed by Crawford-Cabral (1991) and, in general, reflect a north-south turnover in the country, with a specific Angolan plateau group in the center/south of the country similar to what was proposed by Monard (1937b) for reptiles. However, Rodrigues et al. (2015) failed to illustrate the considerable within-region diversity proposed by Crawford-Cabral (1991), most likely because of the uneven geographic representation of the data, and the limitation of using only ungulates, a group that is not speciose and has a potentially weaker biogeographic signal because of high vagility and habitat generalism in some cases.

More distributional data are needed to test and define Angolan zoogeographic zones with more precision, as the currently available information may be insufficient for statistically sound modeling and analysis. Also, due to the uncertainty regarding the phylogenetic and phylogeographic affinities among many taxa, even *a priori* expert classification of given taxa as representatives of “northern” or “southern” lineages, becomes a difficult task. Although it appears evident that herpetofaunal data support both Bocage’s original idea (and its subsequent iterations by Monard, Frade, and Crawford-Cabral) of a north-south separation with further, sometimes interdigitating subdivisions, and the significance of the Angolan Escarpment as a center of endemism as well as a corridor and refugium for West/Central African taxa as proposed by Hall (1960), Crawford-Cabral (1991), and Clark et al. (2011), more data are needed to better understand Angola zoogeography.

CONSERVATION

The lack of modern data on the distribution of Angolan biodiversity is a serious issue for conservation planning. Currently, there is no Red List for Angolan vertebrate species and, aside from a few iconic animals such as the Angolan Giant Sable (*Hippotragus niger variani* Thomas, 1916) or marine turtles, no animals are the focus of major conservation programs in the country. However, new programs are currently in preparation by MinAmb and other national and international institutions. The vast majority of the amphibian species occurring in Angola have been evaluated by IUCN and 91 species (78% of the species diversity) are considered Least Concern. In addition, 22 amphibian species (approximately 20% of the species diversity), in which are included all the endemic species, remain classified as Data Deficient. For reptiles (excluding marine turtles), 217 species, representing 78% of the species diversity, have not been evaluated by IUCN, whereas 7 species are considered Data Deficient, 40 are Least Concern, three are Vulnerable, and another is Critically Endangered. For turtles and tortoises (excluding marine turtles), a group particularly affected by habitat loss and human consumption, only three species have been assigned a risk assessment and another has been determined as Data Deficient. Crocodylians range from low risk categories — Least Concern for the common Nile Crocodile, *Crocodylus niloticus* (*Crocodylus suchus*, not yet assessed by the IUCN, may also occur in Angola) to medium (the African Dwarf Crocodile, *Osteolaemus tetraspis*; Vulnerable) and high risk (*Mecistops catraphractus*; Critically Endangered). These last two are known only from the Cabinda enclave. A total of 107 species of lizards (Squamata, excluding snakes) that occur in Angola have not been evaluated by the IUCN, whereas three species are considered Data Deficient (*Nucras scalaris*, *Panaspis cabindae*, and *Trachylepis bayonii*). The remaining taxa are considered Least Concern. The situation is similar in snakes with 107 taxa that have not been evaluated, three taxa considered as Data Deficient (*Namibiana rostrata*, *Atractaspis reticulata heterochilus*, and *Lycophidion hellmichi*), and 18 taxa classified as Least Concern (see Fig. 30 for a graphic summary).

Due to the scarcity of data regarding certain taxa, the majority of the Angolan herpetofauna remain “Not Evaluated” according to the IUCN classifications. The particularly high number of “Not Evaluated” and “Data Deficient” taxa poses a potentially serious problem, as it remains unclear what conservation and management measures might best sustain these species and populations. According to the IUCN guidelines, “Not Evaluated” (as well as “Data Deficient”) is not a category of threat, although until such time as an assessment is made, taxa listed in these categories should not be treated as if they were non-threatened, and it may even be appropriate to give them the same degree of attention as threatened taxa (IUCN 2001). Most “Data Deficient” amphibians and reptiles are listed as such because either distributions are inadequately known or because there are taxonomic issues that preclude correctly evaluating any of the criteria. Distributional informa-

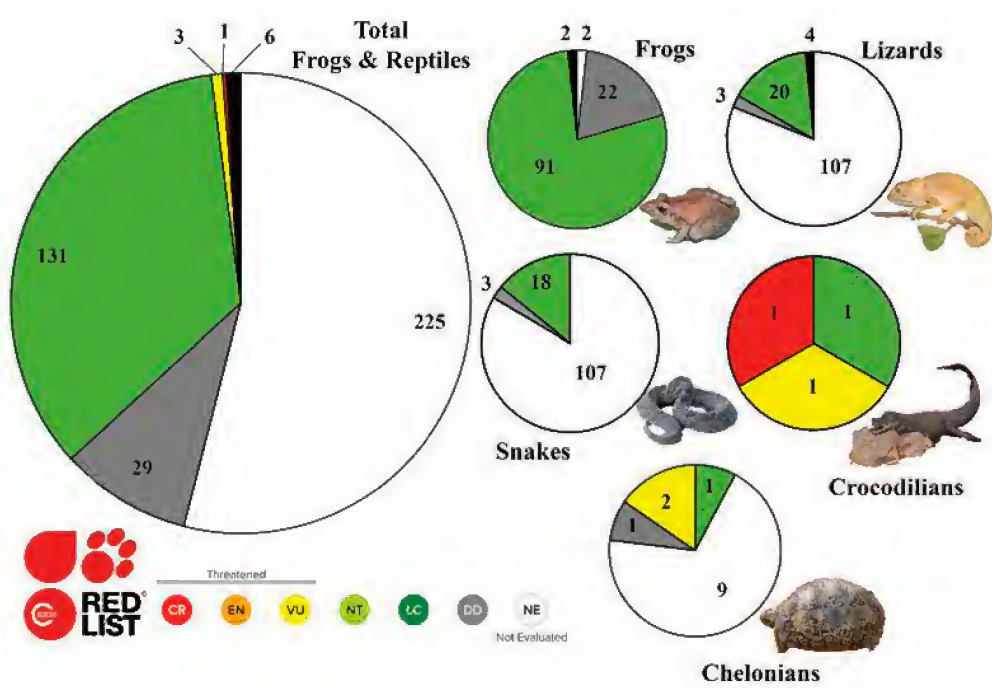


FIGURE 30. Conservation assessment for the different groups of Angolan amphibians and reptiles (excluding marine turtles) according to the current IUCN Red List classification. Black wedges indicate taxa not listed/recognized by IUCN.

tion are critical because these criteria are nearly always used in assigning categories to amphibians and reptiles under IUCN criteria, as other information on population size, trends, and/or threats are typically unavailable. With the currently available knowledge, it is almost impossible to say whether many amphibian and reptile species are widespread in Angola and in viable populations or if they instead are found in limited areas and threatened by local habitat destruction or other factors. Addressing these gaps in knowledge is especially important now as recent rapid economic growth following the end of the civil war means that many habitats might have been recently lost or degraded (USAID 2008).

Whereas the war has taken a terrible toll on larger mammals that have been used by local populations for food, the conflict may have spared certain areas from human influence, notably habitat alteration, because many people fled from the countryside to the cities. In the case of amphibians and reptiles, the long term abandonment of certain areas by humans may have been beneficial as it was, for example, for plants (Huntley and Matos 1994) and possibly for birds (see Cáceres et al. 2015). This is especially true for areas where large-scale agricultural exploitation existed, including coffee plantations in the Angolan central escarpment, which with abandonment have reverted to secondary forest cover, but also other planned civil works, such as dams, newly urbanized areas, and other facilities that were aborted by the war. With the end of conflict, communities are being reestablished in the Angolan countryside, and agriculture, both traditional subsistence slash-and-burn and more modern methods, wood extraction for firewood and charcoal, and urban expansion are again impacting habitats and faunal communities. Although the effects of human activities and habitat alteration on amphibians and reptiles have not yet been assessed in Angola, they are known to be important threats for herpetofauna in other parts of Africa and are already known to negatively impact bird species in Angola (Ryan et al. 2004; Sekercioglu and Riley

2005; Mills 2010; Mills et al. 2011; Cáceres et al. 2015). For example, Mills et al. (2011) noted that for forest birds on Mount Moco, the greatest conservation threats were the unsustainable utilization of wood, clearing of forest for subsistence agriculture, and deliberate burning of vegetation. They showed that the impacts of even small human populations are considerable, and Sekercioglu and Riley (2005) noted that the surroundings of Kumbira Forest have been deforested and plantations of banana, maize, sweet potato and other crops are common throughout the area, as are firewood collection and wildlife hunting. As elsewhere, habitat destruction is one of the main threats to amphibian and reptiles in Angola. Most of the habitat alteration in Angola is due to traditional agricultural and subsistence practices, urban expansion and logging, turning Angola into one of the countries with the highest rates of deforestation in Sub-Saharan Africa (Hansen et al. 2013).

The destruction of some wetland areas, especially swamp areas near urban centers, as was the case of the Panguila Lagoon near Kifangondo, is of special concern. These areas, which are being destroyed due to health concerns but also to provide space for urban development, host diverse amphibian communities and cannot be replaced. Their loss may even have negative consequences for local communities (Schuyt 2005). Other wetland and water use alterations include the implementation of the national hydropower plans and the construction of several dams and reservoirs across the basins of the main river drainages, especially in the Kwanza River Basin, such as the case of the already built Capanda Dam (Ceriaco et al. 2014b) and the recently finalized Laúca Dam (both in Malanje Province), whereas other dams are currently in construction or being planned.

Future climate change may impact the Angolan herpetofauna (e.g., Moise and Hudson 2008). Despite the current lack of specific studies aimed at understanding the potential effects that future climate change might have on Angolan biodiversity, it is known that climate change is likely to affect amphibian and reptile populations significantly (Sodhi et al. 2008; Sinervo et al. 2010; Hof et al. 2011; Munguía et al. 2012; Winter et al. 2016).

Especially regarding amphibians, the emergence of several different serious diseases worldwide is of special concern. Currently there are no data on the presence of pathogens in Angolan amphibian populations (Olson et al. 2016), such as the fungal pathogen *Batrachochytrium dendrobatidis* (*Bd*) (Fisher et al. 2009) that is known to occur elsewhere in Africa, including neighboring countries. Several factors and activities appear to contribute to spreading *Bd*, as for example the pet trade (Fischer and Garner 2007; Picco and Collins 2008), migratory birds (Burrowes and De la Riva 2017), human-induced transportation (Weldon et al. 2004; Kolby et al. 2015), and it is also known that climate change can promote *Bd* expansion and effects on amphibian populations (Pounds et al. 2006; Lips et al. 2008; Rohr and Raffael 2010; Hof et al. 2011). *Bd* is almost certainly already in Angola, though field surveys are needed to understand its distribution and the impact on local species. The environments most suitable for *Bd* will likely mean that amphibian species at mid to high elevations, such as the Angolan escarpment, will likely be most impacted by this pathogen.

One of the most visible threats for reptiles in Angola is illegal hunting and bushmeat. The current limited (yet valuable) available data allows us to understand the two main uses given to reptiles in Angola — human consumption and handicraft. Both uses are harmful for the conservation of certain reptile groups, but are different in nature and likely require different conservation approaches. Despite the recent economic growth and social uplift among the Angolan population, many local populations still have little access to animal protein sources and use bushmeat. Although it is commonly available in the markets of most cities and villages, as well on the sides of major roads, there is scarce data for the bushmeat trade in Angola though there is evidence that it is growing rapidly. Recently Bersacola et al. (2014) provided preliminary data on the bushmeat trade in Angola, and while most animals recorded were mammals, they also found that reptiles,

such as Nile crocodiles, monitor lizards (*Varanus*), and marine turtles, were sold in Luanda markets and on along roads. These animals were sold for varying purposes and in different conditions. Monitor lizards are sold in the form of handbags, skins, and whole fresh animals for human consumption (Fig. 31); Nile crocodiles are traded as skins, skulls, or handbags; and marine turtle shells are sold in Luanda markets for diverse decorative purposes. Besides the species listed by Bersacola et al. (2014), other reptiles are traded in Angola for human consumption. Pythons (genus *Python*) are eaten in most areas of the country (Fig. 32) and considered a desired meat for traditional cuisine, including as part of Angola's most famous traditional meal "Moamba" (Fig. 33). It is also common to find living African mud turtles (*Pelusios* and *Pelomedusa*) and hinged tortoises (*Kinixys*) sold by locals along the road or in city markets for human consumption (Fig. 34, 35). This practice is of special concern as turtle populations in Angola already suffer from the destruction of habitat. Similarly, crocodiles are also hunted for meat though the impact on populations remains unknown (Fig. 36).

Marine turtles are targeted for human consumption with their meat being sold in markets and the eggs harvested by fishermen and coastal communities living near the nesting places (Weir et al. 2007). However, this problem is currently being addressed by local associations, universities, and the government through the project "Kitanbanga," led by Prof. Miguel Morais from the Universidade Agostinho Neto. National authorities have recently released new legislation against the illegal capture of wildlife in the country, and an effort is being made to apply the new rules and prevent the depletion of the country's natural resources. However, as noted by Bersacola et al. (2014), the growth of the local population together with the recent arrival of thousands of immigrants who consume bushmeat, will probably make the situation worst. While bushmeat preferences in Angola are chiefly limited to large animals as the above mentioned, the country has witnessed an influx of overseas immigrants who may put additional pressure on traditionally neglected and feared reptiles, such as elapids and puff-adders.



Figure 31. A dried carcass of *Varanus albigularis angolensis* used for food, in Laúca, Malanje Province (Photo by Luis da Costa).

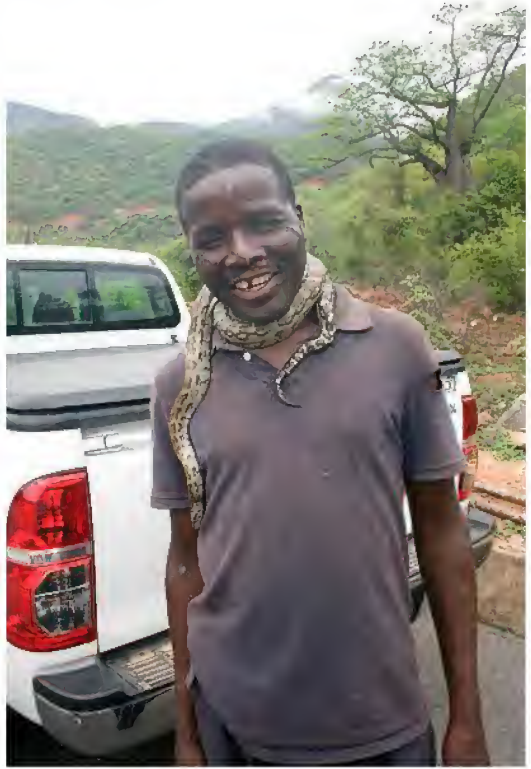


Figure 32. A specimen of *Python natalensis* being sold on the side of the road near Bruco, Moçâmedes-Lubango road, Namibe Province in November 2013 (Photo by Luis Ceria-co).



FIGURE 33. A specimen of *Python* sp. being butchered for human consumption in Bié, Bié Province (Photo by Manuel Botelho).



FIGURE 34. A live specimen of *Pelusios castaneus* purchased from local sellers in Caop Velha, near Cacuaco, Luan-da Province (Photo by Manuel Botelho).



FIGURE 35. Live specimens of *Kinixys belliana*, among other bushmeat, confiscated by Cangandala National Parks rangers from local poachers in September 2015 (Photo by Luis Ceríaco).



FIGURE 36. A Nile Crocodile killed by locals in the Laúca Dam area and destined for local consumption (Photo by Luis da Costa).

Reptile parts are traded in the handcraft markets in Luanda and other big cities. The market of Benfica, on the outskirts of Luanda, is considered the second largest market for illegal ivory in Africa. While elephant tusks and ivory products are a major problem, some reptile parts are also traded there. Monitor lizards, crocodilians, and snake-skins transformed into handbags and other garments are common, as are products made of turtle shells. New legislation has recently been put in practice to ban wildlife products from being sold in the country, and special attention has been paid by the authorities to the Benfica market. Yet it is still possible to find these products being sold (Fig. 37). There are no data available on the impacts of the illegal pet trade smuggling living animals from the country, though it may exist.

Approximately 12% of the Angolan territory is currently protected by some form of conservation area (Fig. 38). Conservation areas in the country are divided into four major categories — National Parks, Regional Parks, Nature Reserves, and Coutadas (game parks). There are currently 16 protected areas in the country, scattered across 11 of the 18 provinces and covering an area

of approximately 169,249 km² (Table 5). Most of these conservation areas were created during the first half of the twentieth century as well in the 1950s, 1960s and 1970s, still during the Portuguese colonial times. Many of these areas were mostly dedicated to hunting and tourism, and their delimitation was almost exclusively decided on the basis of the presence of game species and iconic fauna (see Frade 1958, 1959), often to the detriment of other biological groups (e.g., plants, see Huntley and Matos 1994; or birds, see Dean 2001). Angolan conservation areas are failing to protect several floristic and faunistic groups and are highly biased towards certain others (Romeiras et al. 2014, Rouget et al. 2003, Rodrigues et al. 2004). Despite recent fieldwork in some of the protected areas, there are still limited data on the amphibians and reptiles. Some Angolan protected areas are along trans-frontier conservation zones: Mussuma Conservation Transfrontier



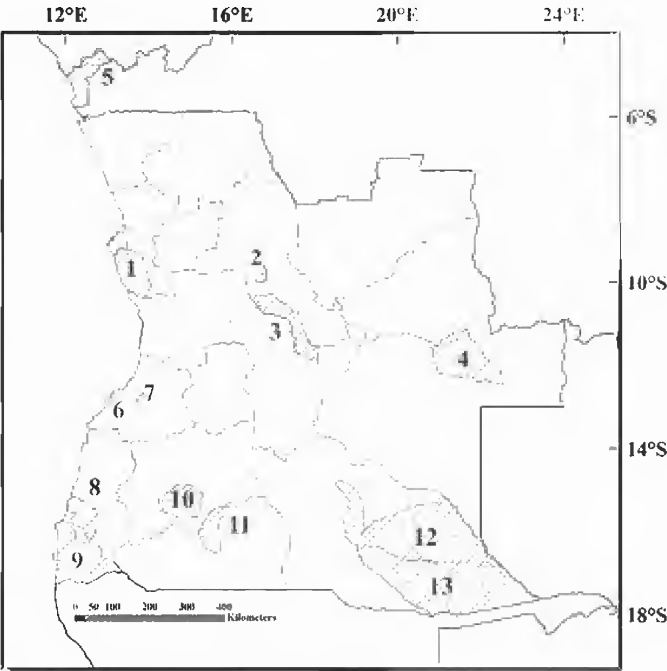
FIGURE 37. Products made from reptile leather being sold in Benfica market on December 2016. (Photo by Luis Ceriaco). Five different reptile taxa are represented: 1) *Python sebae* in the belts and wallets in the top picture; 2) *Varanus albigularis angolensis* in the top-left wallet in the bottom picture; 3) *Bitis arietans* in the top-right wallet in bottom picture; 4) *Crocodylus niloticus* in the bottom-left wallet in the bottom picture; and 5) *Naja melanoleuca* in the bottom-right wallet in the bottom picture.

Area, between Angola and Zambia; Maiombe Conservation Transfrontier Area, between Angola (Cabinda Province) and the Democratic Republic of the Congo; Okavango/Zambezi Conservation Transfrontier Area, between Angola, Zambia, Zimbabwe, Botswana and Namibia; and the Iona-Skeleton Coast Conservation Transfrontier Area, between Angola and Namibia. In recent years, Angolan authorities have begun reviewing and reorganizing protected areas. The reorganization in 2011 led to the creation of a new national park in Cabinda Province and to the elevation of former reserves and coutadas to National Parks in Cuando Cubango Province: the Parque Nacional de Mavinga and the Parque Nacional do Luenge-Luiana, covering the former Reserva Parcial de Luiana and part of the Coutadas Públicas de Longa-Mavinga, Luengue, Luiana and Mucusso. With the objective of reaching 15% protected areas in the country, the creation of new conservation areas around Lagoa Carumbo (Lunda Norte Province), Serra de Pingano (Uíge Province), and in Kumbira Forest (Kwanza Sul Province), as well as three other marine conservation areas along the Angolan coast, have been proposed. These new parks will cover important areas regarding the diversity of amphibians and reptiles that have not been protected so far, but are known to harbor high herpetological diversity (e.g., Ernst et al. 2014). Most of the protected areas still lack touristic and/or logistical infrastructure, but efforts are currently underway to overcome this.

TABLE 5. Current protected areas in Angola (Source: Instituto Nacional da Biodiversidade e Áreas de Conservação)

Protected Areas	Province	Area (km ²)	Map
National Parks			
Parque Nacional do Bicuar	Huíla	7900	10
Parque Nacional da Cameia	Moxico	14450	4
Parque Nacional da Cangandala	Malanje	630	2
Parque Nacional do Iona	Namibe	16150	9
Parque Nacional da Quiçama	Luanda	9960	1
Parque Nacional da Mupa	Cunene	6600	11
Parque Nacional de Mavinga	Cuando Cubango	46072	12
Parque Nacional de Luengue-Luiana	Cuando Cubango	45000	13
Parque Nacional do Mayombe	Cabinda	1930	5
Regional Parks			
Parque Natural e Regional da Chimalavera	Benguela	150	6
Nature Reserves			
Reserva Parcial do Namibe	Namibe	4450	8
Reserva Parcial de Bufalo	Benguela	400	7
Reserva Natural Integral do Ilheu dos Passaros	Luanda	2	-
Reserva Natural Integral do Luando	Malanje	8280	3
Coutadas (Game Parks)			
Coutada do Ambriz	Bengo	1125	-
Coutada do Milando	Malanje	6150	-
TOTAL		169249	

FIGURE 38. Map of the main protected areas in Angola. 1) Parque Nacional da Quiçama; 2) Parque Nacional da Cangandala; 3) Reserva Natural Integral do Luando; 4) Parque Nacional da Cameia; 5) Parque Nacional do Mayombe; 6) Parque Natural e Regional da Chimalavera; 7) Reserva Parcial do Bufalo; 8) Reserva Parcial do Namibe; 9) Parque Nacional do Iona; 10) Parque Nacional do Bicuar; 11) Parque Nacional da Mupa; 12) Parque Nacional de Mavinga; 13) Parque Nacional de Luenge-Luiana.



MATERIALS AND METHODS

DATA.—Data on the distribution of amphibians and reptiles (excluding marine turtles) of Angola were obtained from all available bibliographic sources. No museum records or data on recently collected material were added, although many of the compiled records will overlap with these. We undertook a thorough literature review, focusing on studies on the herpetofauna of Angola and on subsequent studies within which Angola specimens were cited, including taxonomic revisions and fieldguides. For each taxon, information on known occurrences in Angola, type data, the IUCN Global Conservation status (gathered from the IUCN official website <http://www.iucnredlist.org>), the global distribution of the species (following available bibliographic data), and comments relating to the taxonomy of the species, the status of types, or issues relating to distribution, was compiled and presented in individual accounts (see **ACCOUNT STANDARDIZATION** section below). Taxonomy and nomenclature of all the species was updated following the most recent available reviews and authorities for amphibians (e.g., Channing 2001; Channing and Howell 2006; Amiet 2012; Frost 2014; Schiøtz 1999), turtles (Turtle Taxonomy Working Group 2014), crocodilians (Eaton 2009; Hekkala et al. 2010), “lizards” (e.g., Bayless 2002; Tilbury 2010; Bates et al. 2013), and snakes (e.g., Haacke 1997; Broadley and Wallach 2009; Wallach et al. 2014). Other sources and/or taxonomic/nomenclatural decisions are detailed in the relevant species accounts. In some cases, species identifications were updated on the basis of reexamination of the specimens upon which published records were based. In addition, the authors used their own knowledge of the groups to estimate when literature records likely represented misidentifications. In such cases, records have been presented under their revised identities, usually with comments explaining the action. While in many cases it was possible to assign previously incorrect identifications (e.g., species that were highly unlikely to occur in the country or with extralimital distributions) to the corresponding correct taxa with a reasonable degree of certainty, in many cases this was not possible. This was particularly common in taxonomically and nomenclatural problematic groups, as for example the case of *Hyperolius*. In these cases, we opt to leave the originally cited names, even if we strongly suspect that they do not occur in the Angola. This option was based on the fact that the current taxonomy of the groups and in many cases the destruction of key type material prevents us from assigning them to a more appropriate name, but we have kept them as the purpose of the Atlas is to rescue these references from obscurity and flag them for future revisions. In one instance (see *Trachylepis monardi* nom. nov. account), a nomenclatural act was implemented following the International Code of Zoological Nomenclature (ICZN; ICZN 1999).

MAPPING SPECIES OCCURRENCES.—The collecting locality for each bibliographic reference was georeferenced using decimal degree conversions of: 1) the gazetteer for all the vertebrate collections in Angola for publications before 1989 (Cabral and Mesquitela 1989) and 2) GPS location records in the case of more recent publications. When no explicit spatial data were available in Cabral and Mesquitela (1989) or in the recent publications, we used the GEOLocate online application (<http://www.museum.tulane.edu/geolocate/>). Data for each species were then prepared as separate spreadsheets and opened as XY points in an Angola base map prepared in ArcGIS ArcMap ver. 10.4.1. Records were plotted as points for each locality. Each point only represents the presence of a taxon in a given locality, independent of the number of records for that given taxon at that same locality. Each map corresponds to a single taxon, with the exception of those presenting more than one currently recognized subspecies, each of which is represented by a different symbol. When the status of subspecies was considered unresolved or particularly problematic they were treated as one single taxon on the map. For dubious records we plotted the record with a “?” whereas for clearly erroneous records we plotted the record as an “X.”

ACCOUNT STANDARDIZATION.—Taxonomic accounts are organized by family (following Pyron et al. 2013), genus and species/subspecies. Each family is presented in bold capitals, followed by nomenclatural authority and date. Each genus is presented in bold, followed by nomenclatural authority and date. Species and subspecies accounts are arranged in alphabetical order within each genus and follow a standardized format: the currently accepted scientific name, followed by nomenclatural authority and data, all in bold, followed by the English common name for the species in bold capitals, chiefly following either Branch (1998), Uetz and Hosek (2016), unless no available name was found. In cases where the taxon is currently only known to occur in Angola, the word “Endemic,” in parentheses, follows the English common name. This is followed by details of the original description (regardless the original geographical origin of the type material), containing the original nomen in its original spelling (in bold), reference (author/s name, date and page) and data on the type specimen(s) (current museum accession number(s), collectors, and type locality). The type locality is spelled as in the original reference, followed by the current name of the locality (if different) and current province, in square brackets. Lectotype designations and similar data are also included in this section. A list of all the different chresonyms that have been applied to the taxon in Angola (i.e., Angolan material is referred to explicitly) is presented, each of the chresonyms (in bold) is followed by a list of references (including author, date and page) where they were used. The account continues with the Global conservation status according IUCN Red List assessments (Version 2016-3); Global distribution; and a list of all known occurrences in Angola. These latter are organized by province (in bold), with the original spelling of the locality in quotes, followed by the georeferenced decimal coordinates in square brackets and the reference to where that locality was cited (author, date, page) for the given taxa in parentheses. In cases with an unknown or imprecise (unplottable) locality we listed the stated place name as an “Undetermined Locality,” presenting the data following the above scheme, but without the georeferenced decimal coordinates. All the accounts are accompanied by a point locality distribution map for the given species, plotting all the localities listed above. Each account is closed by taxonomic and distributional notes.

Abbreviations and Symbolic Codes (Acronyms)

Museums symbolic codes largely follow Sabaj (2016) for institutional resource collections in herpetology and ichthyology, except for collections not covered therein. Other frequently used abbreviations or acronyms are also listed.

AHMB — Arquivo Histórico do Museu Bocage, Museu Nacional de História Natural e da Ciência Lisboa [see also MUHNAC, and MBL], Portugal

AMG — Albany Museum, Grahamstown, Eastern Cape Province, South Africa [herpetological specimens transferred to Port Elizabeth Museum]

AMNH — American Museum of Natural History, New York, New York, USA

ANSP — Academy of Natural Sciences of Drexel University, Philadelphia, Pennsylvania, USA [formerly Academy of Natural Sciences of Philadelphia]

BM — British Museum (Natural History) [currently BMNH], London, England, UK

BMNH — The Natural History Museum, London, England, UK [formerly British Museum of Natural History]

CAS — California Academy of Sciences, San Francisco, California, USA

CM — Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA

CNHM — Chicago Natural History Museum [currently FMNH] Chicago, Illinois, USA

CZL — Centro de Zoologia de Lisboa [currently IICT], Lisboa, Portugal

FMNH — Field Museum of Natural History, Chicago, Illinois, USA [see also CNHM]

GNM — Göteborgs Naturhistoriska Museum [formerly Naturhistoriska Riksmuseet] Göteborg, Sweden

- IICA** — Instituto de Investigação Científica de Angola, Sá da Bandeira [currently Lubango], Angola
- IICT** — Instituto de Investigação Científica Tropical [formerly Centro de Zoologia (CZL)] Lisboa, Portugal
- INBAC** — Instituto Nacional da Biodiversidade e Áreas de Conservação, Kilamba-Kiayi, Angola
- IRSNB** — Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium
- IUCN** — International Union for Conservation of Nature, Gland, Switzerland
- LCFM** — La Chaux-de-Fonds Musée d'histoire naturelle [currently MNHC], Chaux-de-Fonds, Switzerland
- MAFR** — Museum Adolphi Friderici Regis (also Museum Drottningholmense), Drottningholm, Sweden [now incorporated into NHR]
- MBL** — Museu Bocage [= MB] [currently Museu Nacional de História Natural e da Ciência de Lisboa] Lisboa, Portugal
- MCZ** — Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA
- MD** — Museu Regional do Dundo, Dundo, Lunda Norte, Angola
- MHNFCP** — Museu de História Natural e da Ciência da Universidade do Porto [formerly MUP], Porto, Portugal
- MINAMB** — Ministério do Ambiente da República de Angola, Luanda, Angola
- MUHNAC** — Museu Nacional de História Natural e da Ciência [but see MBL, as the right acronym for the zoological section], Lisboa, Portugal
- MMK** — McGregor Museum, Kimberely, Northern Cape Province, South Africa
- MHNC** — Musée d'histoire naturelle de La Chaux-de-Fond, Chaux-de-Fonds, Switzerland [see also LCFM]
- MNHG** — Muséum d'Histoire Naturelle de la Ville de Genève, Genève, Switzerland
- MNHN** — Muséum National d'Histoire Naturelle Paris, Ile-de-France, France
- MNHNL** — Museu Nacional de História Natural, Luanda, Angola
- MRAC** — Musée Royal de l'Afrique Centrale, Tervuren, Belgium
- MSNM** — Museo Civico di Storia Naturale di Milano, Milano, Lombardia, Italy
- MUP** — Museu de História Natural do Porto [currently MHNFCP], Porto, Portugal
- MWNH** — Museum Wiesbaden, Naturhistorische Landessammlung, Wiesbaden, Hesse, Germany
- MZUB** — Museo di Zoologia dell'Università di Bologna, Bologna, Italia
- MZUT** — Museo Zoologico, Università di Torino [currently MSNM] Torino, Italy
- NHR** — Naturhistoriska Riksmuseet [includes MAFR and MDR] Stockholm, Sweden
- NMB** — National Museum Bloemfontein, Bloemfontein, South Africa
- NMBA** — Naturhistorisches Museum Basel, Basel, Switzerland
- NMSR** — National Museum, Salisbury, Rhodesia [now Harare, Zimbabwe] [now incorporated into NMZB]
- NMSZ** — National Museums of Scotland [formerly TST and RSM], Edinburgh, Scotland, UK
- NHMW** — Naturhistorisches Museum, Wien, Austria
- NMZB** — Natural History Museum, Bulawayo, Zimbabwe
- PEM** — Bayworld, Port Elizabeth Museum, Port Elizabeth, Eastern Cape Province, South Africa [now also incorporates AMG]
- RCSM** — Museum of the Royal College of Surgeons, London, England, UK
- RMNH** — Naturalis-Nationaal Natuurhistorisch Museum [formerly Rijksmuseum van Natuurlijke Historie], Leiden, The Netherlands
- RSM** — Royal Scottish Museum, Edinburgh, Scotland, UK [now MNSZ]
- SAM** — South African Museum, Cape Town, Western Cape Province, South Africa
- SMF** — Senckenberg Forschungsinstitut und Naturmuseum [alternatively Senckenberg Research Institute and Natural History Museum], Frankfurt am Main, Hesse, Germany
- SMWN** — National Museum of Namibia [formerly Staatsmuseum-Windhoek, formerly State Museum], Windhoek, Khomas Region, Namibia
- TM** — Ditsong National Museum of Natural History [formerly Transvaal Museum of Natural History, formerly Northern Flagship Institution] Pretoria, Gauteng, South Africa
- TST** — T.S. Traill private collection [incorporated into NMSZ]
- USNM** — National Museum of Natural History [formerly United States National Museum], Smithsonian Institution, Washington, District of Columbia, USA
- UM** — Umtali Museum, Umtali, Rhodesia [now Mutare, Zimbabwe] [now incorporated into NMZB]

- UZ** — Zoological Museum of the University of Utrecht, Utrecht, The Netherlands [now incorporated into RMNH]
- ZFMK** — Zoologisches Forschungsmuseum Alexander Koenig [formerly Zoologisches Forschungsinstitut und Museum Alexander Koenig], Bonn, North Rhine-Westphalia, Germany
- ZMB** — Museum für Naturkunde [formerly Zoologisches Museum der Humboldt-Universität], Berlin, Germany
- ZMH** — Zoologisches Museum Hamburg [formerly Zoologisches Institut und Museum], Universität Hamburg, Hamburg, Germany
- ZMUC** — Zoologisk Museum, København, Denmark
- UUMZ** — Evolutionsmuseet, Uppsala Universitet, Uppsala, Sweden
- ZSM** — Zoologische Staatssammlung München [formerly Zoologische Sammlung des Bayerischen Staates], München, Bayern, Germany

TAXONOMIC ACCOUNTS

AMPHIBIA

Order ANURA Duméril, 1805

Family Pipidae Gray, 1825

Genus *Xenopus* Wagler, 1827*Xenopus andrei* Loumont, 1983

ANDRE'S CLAWED FROG

Xenopus andrei Loumont 1983:170. Holotype: MNHG 2088.32 (collector unknown, probably C. Loumont).

Type locality: "Longyi (Nord de Kribi)," Cameroon.

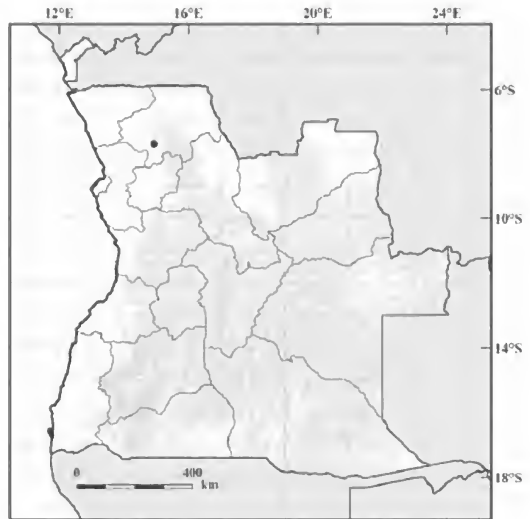
Xenopus andrei: IUCN SSC Amphibian Specialist Group (2013d), Wagner et al. (2013:206), Ernst et al. (2015:147), Evans et al. (2015:29), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from few localities in southern Cameroon, north-eastern Gabon and western Central African Republic. It was recently found in northwestern Angola and it has been suggested to be more widespread, extending into Equatorial Guinea, the Congo and the Democratic Republic of Congo.

Ocurrences in Angola (Map 1): Uíge: "Serra do Pingano" [-7.67297, 14.93825] (Ernst et al. 2015:148).

Taxonomic and distributional notes: The Angolan record (Ernst et al. 2015) provides documentation of the southernmost range of this species. Wagner et al. (2013) and Ernst et al. (2015) included the species in the *X. fraseri* subgroup, which comprised several morphologically similar species that mainly occur in Central Africa. Ernst et al. (2015) clarified the taxonomic status of the Angolan populations and reviewed the distribution patterns of *Xenopus fraseri* Boulenger, 1905 in Central Africa. Evans et al. (2015) regarded the members of the former *X. fraseri* subgroup, exclusive of *X. fraseri* itself (i.e., *Xenopus amieti* Kobel, Du Pasquier, Fischberg and Gloor, 1980; *X. andrei* Loumont, 1983; *X. boumbaensis* Loumont, 1983; *X. itombwensis* Evans, Carter, Tobias, Kelley, Hanner and Tinsley, 2008; *X. lenduensis* Evans, Greenbaum, Kusamba, Carter, Tobias, Mendel and Kelley, 2011; *X. longipes* Loumont and Kobel, 1991; *X. pygmaeus* Loumont, 1986; *X. ruwenzoriensis* Tymowska and Fischberg, 1973; *X. vestitus* Laurent, 1972; and *X. wittei* Tinsley, Kobel and Fischberg, 1979) as members of the newly proposed *Xenopus amieti* group, to which they added two new species described in their publication — *Xenopus allofraseri* and *Xenopus eysoole*.



MAP 1. Distribution of *Xenopus andrei* in Angola.

***Xenopus cf. epitropicalis* Fischberg, Colombelli and Picard, 1982 CONGOLESE CLAWED FROG**

Xenopus epitropicalis Fischberg, Colombelli and Picard 1982:53. Holotype: BMNH 1982.462 (collectors not stated, possibly M. Fischberg and J.J. Picard). Type locality: “confluent de la Funa et de la Kemi, à 8 km au sud du centre de Kinshasa,” Democratic Republic of Congo.

Xenopus calcaratus: Peters (1877a:618).

Xenopus tropicalis: Laurent (1950a:13; 1954a:70), Frade (1963:254), Cei (1977:16), Kobel (1981:120).

Xenopus epitropicalis: Loumont (1983:176), Ruas (1996:20), Channing (2001:239), Blackburn et al. (2014), Evans et al. (2015:2), Frost (2016).

Xenopus (Silurana) epitropicalis: Frétey et al. (2011:22).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Democratic Republic of Congo and northeast along the Congo River to near the confluence of the Kwa River as well as from near Point Noire (Jackson and Blackburn 2010). It was previously considered to be more widespread with populations extending across Central Africa, however many of those other populations are now treated as separate species.

Ocurrences in Angola (Map 2): The species occurs in Cabinda enclave and in the northeast of the country. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:618; Kobel 1981:120). **Lunda Norte:** “environs de Dundo galerie forestière de la Luachimo (Dundo, Luachimo forest gallery)” [-7.38333, 20.83333] (Laurent 1950a:13, 1954a:70; Kobel 1981:120; Ruas 1996:20). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16).

Taxonomic and distributional notes:

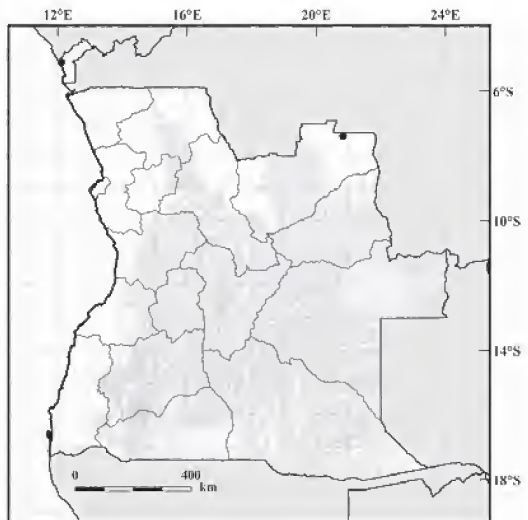
Publications previous to 1982 treated this species as *Xenopus tropicalis* (Gray, 1864) but subsequent studies have revealed that *X. tropicalis* is restricted to tropical West Africa only from Senegal to Cameroon, and that records from the south and east Africa belong to *Xenopus epitropicalis* (Fischberg et al., 1982) (Loumont 1983; Ruas 1996; Evans et al. 2015). However, the distribution of both species requires further study and for now the Angolan population is best assigned to *Xenopus cf. epitropicalis* (Ruas 1996; Channing 2001; Frétey et al. 2011; Frost 2016). Genetic data currently confirm the distribution of *X. epitropicalis* only for Congo and the Democratic Republic of Congo (Evans et al. 2015). It remains unclear whether populations from Angola represent nominotypical *epitropicalis* or one of the recently described species in subgenus *Silurana*, likely *X. mellotropicalis*.

***Xenopus* sp.**

Xenopus fraseri: Laurent (1950a:13, 1954a:70), Cei (1977:16), Kobel (1981:120), Ruas (1996:20), Channing (2001:240), Channing et al. (2012:294), Wagner et al. (2013:206), Ernst et al. (2015:147).

Xenopus (Xenopus) fraseri: Frétey et al. (2011:22).

Global distribution: The taxon is presently known from northeastern Angola, although it like-



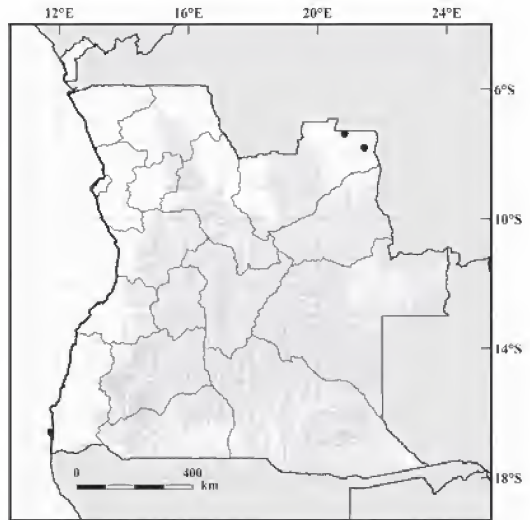
MAP 2. Distribution of *Xenopus epitropicalis* in Angola.

ly represents a species that is more widespread and ranging from northern Angola to Cameroon and Central African Republic.

Ocurrences in Angola (Map 3): Occurs in the extreme northeast of the country. **Lunda Norte:** “Muita, Luembe E (Muita, Luachimo)” [-7.80000, 21.45000] (Laurent 1950a:13; Ruas 1996:20); “Dundo” [-7.36667, 20.83333] (Laurent 1954a:70; Ruas 1996:20); “Lunda Norte (probably Dundo or Muita)” (Kobel 1981:120). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Ceï 1977:16).

Taxonomy and natural history notes: The *Xenopus amieti* subgroup (*sensu* Evans et al., 2015) contains several morphologically similar species that mainly occur in Central Africa (Wagner et al. 2013; Ernst et al. 2015). Previously this group contained *X. fraseri*, but Evans et al. (2015) demonstrated that Central African species referred to this taxon instead represent either *X. allofraseri* or *X. parafraseri*. The identity of the Angolan populations of *Xenopus* sp. remains uncertain, but they most likely represent a species within the *amieti* subgroup. Only two species, *X. pygmaeus* and *X. fraseri*, have previously been reported from south of the Congo Basin (Laurent 1950a, 1954a; Ruas 1996; Wagner et al. 2013). The species *X. fraseri* has frequently been confused with *X. andrei*, a closely related species previously believed to be restricted to Cameroon, Gabon, and the Central African Republic, but which was recently found in Angola (Ernst et al. 2015).

Laurent (1950, 1954a) reported many specimens (~133) from Angola, collected in Lunda Norte Province, in “Dundo” and “Muita” regions in northeastern Angola, an area bordering the Democratic Republic of Congo. Ruas (1996) referred these previously published records from the northeastern Angola to *X. fraseri* although she also provided a complementary map (Ruas 1996) with other records for *X. fraseri* in central and southern Angola, with no further detail, on the basis of these records. It is likely that all previous records of *X. fraseri* in Angola actually refer to other species, including *X. andrei* or recently described species (Evans et al. 2015). Because of the lack of corresponding vouchers and tissue samples for genetic analyses, it cannot at this time be determined to which species these records might be best assigned.



MAP 3. Distribution of *Xenopus* sp. in Angola.

Xenopus muelleri (Peters, 1844)

MÜLLER'S CLAWED FROG

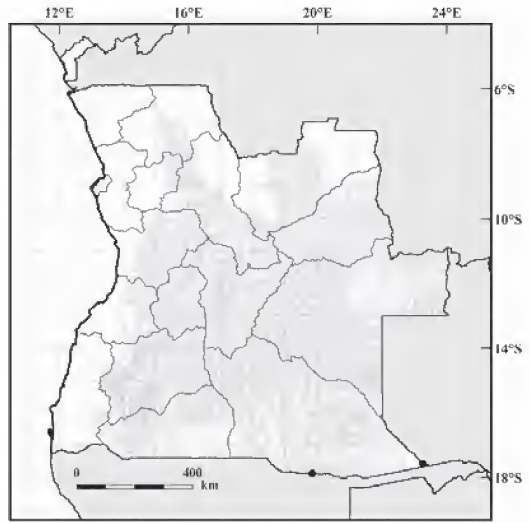
Dactylethra Muelleri Peters 1844:37. Syntypes: ZMB 3556 [3 tadpoles], 3557 [3 specimens], 6164 [2 specimens] and MZUT An264 *fide* Bauer et al. (1995:48) (collector W.C.H. Peters). Type locality: “Mozambique” (Peters 1844:37), restricted to “Tete, Zambezi River” [Mozambique] by Loveridge (1953:308). *Xenopus muelleri*: Conradie et al. (2016:17).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known to occur along the East African coastal belt from extreme southern Kenya through Tanzania to the northwestern border of South Africa. There is an apparently allopatric population from Burkina Faso eastward across Sudan-Guinea to northeastern Democratic Republic of Congo and Angola.

Occurrences in Angola (Map 4): Occurs in the eastern regions of Angola. **Cuando Cubango:** “Cubango basin (29)” [-17.8729, 19.83333] (Conradie et al. 2016:17); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10,17).

Taxonomic and distributional notes: Given the known distribution for *X. muelleri* and the fresh material collected by Conradie et al. (2016), it is expected that the species is more widespread in the eastern regions of Angola, and probably occurs in sympatry with *X. poweri*.



MAP 4. Distribution of *Xenopus muelleri* in Angola.

Xenopus petersii Bocage, 1895

PETERS' CLAWED FROG

Xenopus Petersii Bocage 1895a:187. Syntypes: MBL 3.476 (S. Salvador do Congo, collector António Barroso), 3.473 (Quimbundo), 3.474-477 (Caconda), 3.478 (Dombe), 3.479 (Quibula), 3.481-483 (Huila), 3.485 (Cassange), 3.486-488 (Dondo) (collector J.A. d'Anchieta) [15 specimens] *fide* Perret (1976a:16). All destroyed by fire 18 March 1978. Bauer et al. (1996:271) reported one syntype from “Catumbella” ZMB 5831, as a surviving specimen from exchanged from the MBL. Type locality: “S. Salvador do Congo,” “Dondo,” “Caconda,” “Dombe,” “Quibula,” “Huila,” “Cassange” and “Quindumbo” (Bocage 1895a:187), [= M'Banza Congo, Dondo, Caconda, Dombe, Huila, Cassange and Quindumbo], Angola.

Dactylethra laevis: Günther (1865a:480).

Dactylethra mülleri: Bocage (1867b:227).

Dactylethra Multeri: Bocage (1879b:89, 1879c:96).

Xenopus muelleri: Boulenger (1882:457), Loveridge (1957:308).

Xenopus petersii: Bocage (1896a:113, 1897a:206), Ferreira (1906:166), Schmidt (1936:128), Bauer et al. (1996:271), Channing (2001:248), Measey and Channing (2003:325), Furman et al. (2015:910), Frost (2016), Ceriaco et al. (2016b:41).

Xenopus laevis: Boulenger (1905:107), Monard (1937a:25, 1938:55, 76), Hellmich (1957a:22), Inger (1959:540), Kobel (1981:120), Gavetti and Andreone (1993:41).

Xenopus laevis poweri: Laurent (1964a:129), Cei (1977:17).

Xenopus laevis petersi: Loveridge (1957:308), Schmidt and Inger (1959:8), Laurent (1964a:130), Perret (1976a:17), Cei (1977:17), Poynton and Broadley (1985a:508), Poynton and Haacke (1993:13), Ruas (1996:20, 2002:141).

Xenopus (Xenopus) laevis: Frétey et al. (2011:22).

Xenopus cf. petersii: Ceriaco et al. (2014b:669).

Xenopus petersii: Furman et al. (2015:910), Frost (2016), Conradie et al. (2016:17).

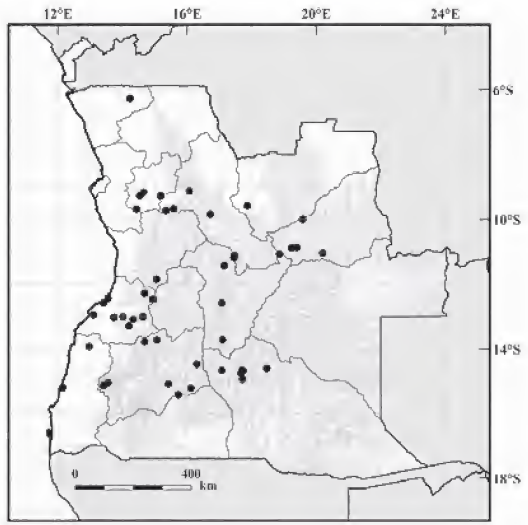
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southern Gabon, southwards to the western Democratic Republic of Congo, Angola, and northern Namibia.

Occurrences in Angola (Map 5): The species likely is widely distributed across western and central Angola. **Zaire:** “St. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:187, 1897a:206; Loveridge 1957:308; Perret 1976a:17; Bauer et al. 1996:271; Ruas 1996:20). **Kwanza**

Norte: “Cambondo” [-9.15963, 14.65771] (Ferreira 1906:166; Monard 1938:55); “Rio Luinha” [-9.26667, 14.53333] (Ferreira 1906:166); “Ambaca” [-9.26667, 15.18333] (Bocage 1895a:187, 1897a:206; Monard 1938:55; Loveridge 1957:308; Bauer et al. 1996:271; Ruas 1996:20, 2002:141); “Dondo” [-9.68333, 14.43333] (Bocage 1895a:187, 1897a:206; Monard 1938:55; Loveridge 1957:308; Perret 1976a:17; Loumont 1984:728; Bauer et al. 1996:271; Ruas 1996:20). **Malanje:** “Duque de Bragança” [-9.13333, 16.06667] (Schmidt and Inger 1959:8; Loumont 1984:728; Ruas 1996:20, 2002:141); “Capanda” [-9.72841, 15.34585] (Ceríaco et al. 2014b:669); “Reserva da Palanca Preta (margens do Rio Cuanza)” [-11.11667, 17.46667] (Ruas 2002:141),

“Pungo Andongo” [-9.66667, 15.58333] (Boulenger 1905:107; Monard 1938:55; Ruas 1996:20); “Cangandala National Park” [-9.84606, 16.72233] (Ceríaco et al. 2016b:41). **Kwanza Sul:** “Cassongue” [-11.85000, 15.05000] (Loumont 1984:728; Ruas 1996:20). **Lunda Norte:** “Cassange” [-9.58333, 17.86667] (Bocage 1895a:187, 1897a:206; Monard 1938:55; Perret 1976a:17; Bauer et al. 1996:271; Ruas 1996:20, 2002:141). **Lunda Sul:** “mare Tchifuka, Alto Cuílo, Lunda (= Chifuca)” [-10.00000, 19.58333] (Laurent 1964a:130; Loumont 1984:728; Ruas 1996:20, 2002:141); “Alto Chicapa, Lunda” [-10.88333, 19.23333] (Laurent 1964a:130; Ruas 1996:20, 2002:141); “sources du Cuílo, Alto Chicapa, rives sans forêt, Lunda (= Rio Cuílo)” [-10.86667, 19.40000] (Laurent 1964a:130; Loumont 1984:728; Ruas 1996:20, 2002:141); “Dala” [-11.03333, 20.20000] (Monard 1937a:25, 1938:76; Ruas 1996:20, 2002:141); “mare des rives du Kutele, affl. droit du Cuango, Alto Chicapa, Lunda (= Rio Cutele)” [-11.06667, 18.86667] (Laurent 1964a:130; Ruas 1996:20, 2002:141). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1936:128; Monard 1938:55; Schmidt and Inger 1959:8; Loumont 1984:728; Ruas 1996:20, 2002:141); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:128; Monard 1938:55; Schmidt and Inger 1959:8; Loumont 1984:728; Ruas 1996:20, 2002:141); “Nequilo” [-12.58500, 17.07000] (Furman et al. 2015 - see Table S1); “Cubango basin (10)” [-13.71616, 17.09661] (Conradie et al. 2016:8-9, 17). **Benguela:** “Quibula” [-12.28333, 14.68333] (Bocage 1895a:187; Monard 1938:55; Loveridge 1957:308; Perret 1976a:17; Loumont 1984:728; Bauer et al. 1996:271; Ruas 1996:20, 2002:141); “Catumbella (= Catumbela)” [-12.43333, 13.55000] (Bocage 1895a:187; Monard 1938:55; Loveridge 1957:308; Loumont 1984:728; Bauer et al. 1996:271; Ruas 1996:20, 2002:141); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:187; Monard 1938:55; Loveridge 1957:308; Bauer et al. 1996:271; Ruas 1996:20, 2002:141); “Benguella (= Benguela)” [-12.58333, 13.41667] (Bocage 1895a:187, 1897a:206; Boulenger 1882:457, 1905:107; Monard 1938:55; Loveridge 1957:308; Bauer et al. 1996:271; Ruas 1996:20, 2002:141); “Dombe” [-12.95000, 13.10000] (Bocage 1879b:89; 1895a:187, 1897a:206; Monard 1938:55; Perret 1976a:17; Bauer et al. 1996:271; Ruas 1996:20, 2002:141); “Caimbambo” [-13.01667, 14.01667] (Loumont 1894:728; Ruas 2002:141); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:22); “Catengue” [-13.03333, 13.73333] (Schmidt and Inger 1959:8; Loumont 1984:728; Ruas 1996:20, 2002:141); “Cubal da Ganda (Marco de Canavezes)” [-13.08333, 14.33333] (Laurent 1964a:129; Ruas 1996:20, 2002:141);



MAP 5. Distribution of *Xenopus petersii* in Angola.

“Hanha” [-13.30000, 14.20000] (Bocage 1896a:113; Monard 1938:55; Ruas 1996:20, 2002:141). “Rio Coporolo (= Coporola)” [-13.93333, 12.96667] (Loumont 1894:728; Ruas 2002:141). **Huila:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:187; Monard 1938:55; Loveridge 1957:308; Perret 1976a:17; Loumont 1984:728; Bauer et al. 1996:271; Ruas 1996:20, 2002:141); “Kalukembé (= Caluquembe)” [-13.78333, 14.68333] (Monard 1937a:25, 1938:55, 76; Ruas 1996:20, 2002:141); “Kuvangu (= Cubango)” [-14.46667, 16.30000] (Monard 1937a:25, 1938:55, 76; Ruas 1996:20, 2002:141); “Huilla (= Huila)” [-15.05000, 13.55000] (Günther 1865a:480; Bocage 1895a:187, 1897a:206; Monard 1938:55; Schmidt and Inger 1959:9; Perret 1976a:17; Bauer et al. 1996:271; Ruas 1996:20, 2002:141); “Osi (= Osse)” [-15.08333, 15.41667] (Monard 1937a:25, 1938:55, 76; Ruas 1996:20, 2002:141); “Lagoa Nuntechite” [-15.13333, 13.41667] (Poynton and Haacke 1993:13); “Kampulu (= Campulu-Cambissa)” [-15.21667, 16.11667] (Monard 1937a:25, 1938:55, 76; Ruas 1996:20, 2002:141); “Kului (= Cului)” [-15.41667, 15.73333] (Monard 1937a:25, 1938:55, 76; Ruas 1996:20, 2002:141). **Namibe:** “Môssamedes” [-15.20000, 12.15000] (Bocage 1967b:227; Loumont 1984:728; Ruas 1996:20, 2002:141). **Cuando Cubango:** “Kandin-gu” [-14.66667, 17.70000] (Monard 1937a:25, 1938:55, 76; Ruas 1996:20, 2002:141); “Cubango basin (3)” [-14.94277, 17.71863] (Conradie et al. 2016:8-9, 17); “Cubango basin (5)” [-14.74628, 17.66844] (Conradie et al. 2016:8-9, 17); “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9, 17); “Cubango basin (21)” [-14.66586, 17.07661] (Conradie et al. 2016:8-9, 17); “Cuito basin (24)” [-14.60622, 18.46722] (Conradie et al. 2016:8-9, 17). **Undetermined Locality:** without precise locality (Bocage 1879b:95); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17); “plateaus regions” (Cei 1977:17); “arid territories along the coast” (Cei 1977:17).

Taxonomic and distributional notes: See notes below for *Xenopus poweri*.

Xenopus poweri Hewitt, 1927

POWER’S CLAWED FROG

Xenopus poweri Hewitt 1927a:413, pl. 24. fig. 3. Holotype: MMK/F/898 (collector J.H. Power). Type locality: “Victoria Falls,” Zambia and Zimbabwe border.

Xenopus laevis poweri: Schmidt and Inger (1959:8), Laurent (1964a:129).

Xenopus laevis: Kobel (1981:120), Channing (2001:243).

Xenopus laevis petersii: Ruas (1996:20, 2002:141).

Xenopus (Xenopus) laevis: Frétey et al. (2011:22).

Xenopus poweri: Furman et al. (2015:910), Frost (2016), Conradie et al. (2016:17).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from central and eastern Nigeria to eastern Cameroon and western Central Africa Republic, south to the Democratic Republic of Congo, eastern and southeastern Angola, the Okavango Region of Namibia, Zambia, and western Zimbabwe to northern Botswana.

Occurrences in Angola (Map 6): The species occurs in central and western Angola, while *X. poweri* is more restricted to the east and southeastern regions. **Mexico:** “Reserva da Palanca Preta (Rio Calombe)” [-11.83333, 19.93333] (Ruas 1996:20; Ruas 2002:141); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:130; Ruas 1996:20, 2002:141); “Lucusse” [-12.51667, 20.81667] (Ruas 1996:20, 2002:141). **Cuando Cubango:** “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10, 17); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10, 17).

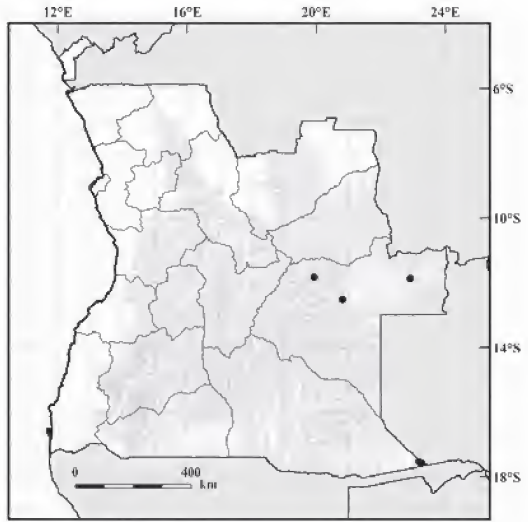
Taxonomic and distributional notes: The African clawed frog *Xenopus laevis* (Daudin, 1903) has a large native distribution over much of sub-Saharan Africa, but despite its important role in biological research, its phylogeography and evolutionary history remains poorly known. The

historic data for *Xenopus laevis* in Angola begins with Günther (1865a), who cited the species for “Huila,” followed by several authors including Boulenger (1905), Monard (1937a, 1938), and Hellmich (1957a). After Günther’s citation, Bocage (1895a) described a new species, *Xenopus petersii*, based on numerous specimens deposited in Museu Bocage, Lisboa (see above), all considered syntypes by Perret (1976a). Unfortunately, the syntypes were destroyed in the fire in the Museu Bocage in 1978. Bauer et al. (1996) reported a surviving syntype from “Catumbella” deposited in Museum für Naturkunde, Berlin.

Parker (1936) described four races or groups of *X. laevis*, reducing *X. petersii* to a subspecies of *X. laevis* and suggesting that *Xenopus poweri* Hewitt, 1927 is a synonym of *X. petersii* (Loveridge 1957). When describing *X. petersii*, Bocage (1895a) listed three “varieties” based on differences in ventral markings. He gave no indication that this variation was geographical, but Schmidt and Inger (1959) reported that 12 FMNH specimens from northern Angola represent Bocage’s “var. A” pattern, whereas five southern Angolan specimens exhibit the “var. B” pattern. They referred *X. laevis petersii* to “var. A,” which represents the northern form distributed from the Upper Cuanza River northward. They assigned *Xenopus laevis poweri* to “var. B” reaching from the Lower Cuanza River across all of southern Angola to Zambia (Schmidt and Inger 1959; Poynton and Broadley 1985a). Mertens (1971), however, rejected this view. Channing (2001) considered *X. petersii* as a full species, removing it from synonymy with *Xenopus laevis*. Measey and Channing (2003) provided molecular evidence for the distinctiveness of *X. petersii* from *X. laevis* and considered *X. poweri* to be a synonym of *X. petersii*, although other authors, including Frétey et al. (2011) nonetheless later included *X. petersii* and *X. poweri* as synonyms of *Xenopus laevis*.

Recently, Furman et al. (2015) provided an analysis of molecular variation in the *X. laevis* group, which clarified the distribution of these lineages and supported the recognition of *X. laevis sensu stricto*, *X. petersii* Bocage, 1895, and *X. victorianus* Ahl, 1924 and revalidated *X. poweri* Hewitt, 1927 as a separate species. These authors restricted *X. laevis* to South Africa and the population from Western Central Africa to *X. petersii*, which indicates that the central and western Angolan population should be referred to the latter. They also proposed that portions of the currently recognized distributions of *X. laevis* north of the Congo Basin and *X. petersii* south of the Congo Basin should be referred to *X. poweri*. This suggests that populations from eastern and southeastern Angola should be referred to *X. poweri* (Furman et al. 2015).

Based on the available studies and in some new material recently collected by Conradie et al. (2016), we refer records from Moxico Province to *X. poweri*, including those from “Lucusse,” “Reserva da Palanca Preta,” “Rio Calombe” (Ruas 1996, 2002), and “Cazombo” (Laurent 1964a).



MAP 6. Distribution of *Xenopus poweri* in Angola.

Family Bufonidae Gray, 1825**Genus *Mertensophryne* Tihen, 1960*****Mertensophryne melanopleura* (Schmidt and Inger, 1959)****DARK-SIDED TOAD**

Bufo melanopleura Schmidt and Inger 1959:23, fig. 8, pl. 4, fig. 2. Holotype: IRSNB 1.265, formerly Inst. Parc. Nat. Congo Belge 807 (collector G.F. de Witte). Type locality: “Kankunda, Parc National de l’Upemba, Belgian Congo” (Schmidt and Inger 1959:23), Democratic Republic of Congo.

Bufo melanopleura: Poynton and Broadley (1988:481), Ruas (1996:22, 2002:142), Channing (2001:86).

Mertensophryne melanopleura: Frétey et al. (2011:24), Frost (2016).

Global conservation status (IUCN):

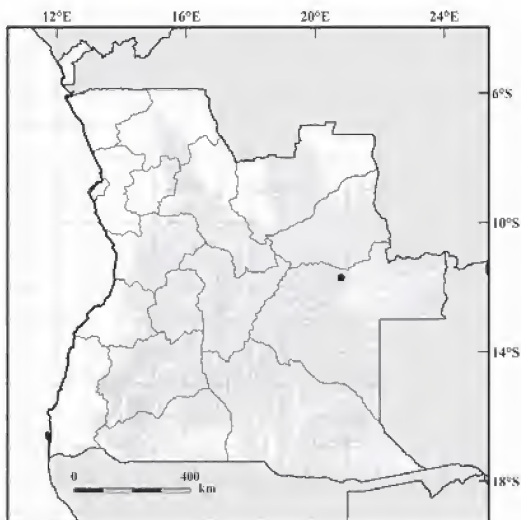
Least Concern.

Global distribution: The species is known from the southern Democratic Republic of Congo, eastern Angola, and Zambia.

Occurrences in Angola (Map 7): There is a single record from eastern Angola. **Mexico:** “Lago Cameia” [-11.71667, 20.80000] (Ruas 1996:22, 2002:142; Channing 2001:86).

Taxonomic and distributional notes:

The species is presently known only from one published locality in Angola but presumably occurs more widely in woodlands and forests (Poynton and Broadley 1988; Ruas 1996).



MAP 7. Distribution of *Mertensophryne melanopleura* in Angola.

Mertensophryne* aff. *mocquardi* (Angel, 1924)*MOCQUARD’S TOAD**

Bufo Mocquardi Angel 1924:270. Syntypes: MNHP 1924.49–55 [7 specimens] (collectors Ch. Alluaud and R. Jeannel). Type locality: “mont Kinangop et des forêts inférieures du mont Kénia” (Angel 1924:270), [= Kinangop and Kenya Plateau], Kenya.

Bufo mocquardi: Monard (1937a:28, 1938:56, 80), Cei (1977:17).

Bufo mocquardi: Channing and Howell (2006:86).

Mertensophryne mocquardi: Frost (2016).

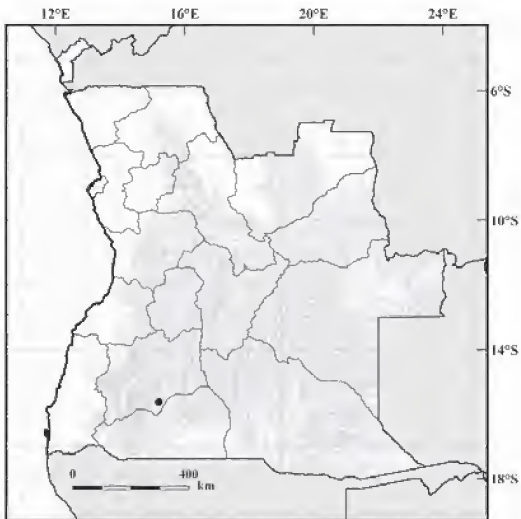
Global conservation status (IUCN):

Data Deficient.

Global distribution: The species is known from Kenya.

Occurrences in Angola (Map 8): There is one record of this species from “Mulondo” in Huíla Province. **Huíla:** “Mulondo” [-15.63333, 15.20000] (Monard 1937a:28, 1938:56, 80).

Undetermined Locality: “arid territories along the coast” (Cei 1977:17).

Taxonomic and distributional notes:

MAP 8. Distribution of *Mertensophryne mocquardi* in Angola.

Monard (1937a) identified an individual examined by de Witte from “Molundo” as *Bufo mocquardi* (Angel, 1924). de Witte considered this specimen close to *Bufo taitanus* Peters, 1878 but believed that it represented *Bufo mocquardi*. Monard considered the discovery of this species in Angola to be remarkable, since the type specimen is from Kinangop on Mount Kenya. Currently the species *Mertensophryne mocquardi* is only recognized from its type locality (Channing and Howell 2006; Frost 2016). Further studies are needed to confirm the identity of Monard’s specimens.

**Genus *Poyntonophrynus* Frost, Grant, Faivovich, Bain, Haas, Haddad, de Sá,
Channing, Wilkinson, Donnellan, Raxworthy, Campbell, Blotto, Moler,
Drewes, Nussbaum, Lynch, Green and Wheeler, 2006**

***Poyntonophrynus dombensis* (Bocage, 1895)**

DOMBE TOAD

Bufo dombensis Bocage 1895b:51. Syntypes: BMNH 1947.2.21.3–4 (formerly 96.2.28.3–4), MBL T.4-366 and T.4-367 (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Dombe, sur le littoral, au sud de Benguella” [= Dombe Grande, Benguela] Benguela Province, Angola.

Bufo dombensis: Bocage (1897a:206), Monard (1938:55), Inger (1959:540), Perret (1976a:16), Cei (1977:17), Frost (1985:43), Poynton and Haacke (1993:12), Ruas (1996:22), Channing (2001:65).

Poyntonophrynus dombensis: du Preez and Carruthers (2009:162), Frétey et al. (2011:24), Channing et al. (2012:150), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola and northern Namibia.

Occurrences in Angola (Map 9): The species occurs in southwestern Angola.

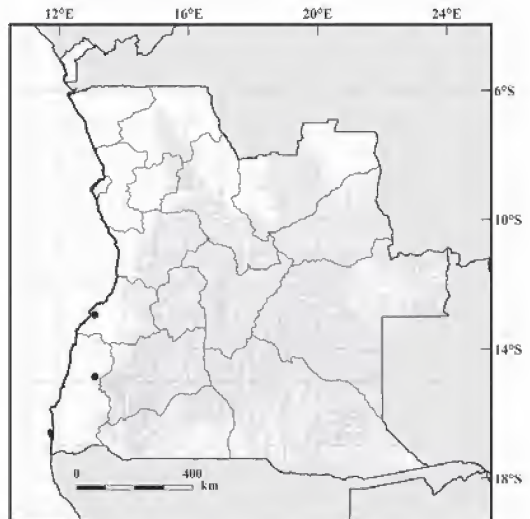
Benguela: “Dombe” [-12.95000, 13.10000] (Bocage 1895b:51; Monard 1938:55; Perret 1976a:16; Frost 1985:43, 2016; Ruas 1996:22).

Namibe: “Assunção” [-14.86667, 13.10000] (Poynton and Haacke 1993:12; Ruas 1996:22).

Undetermined Locality: “arid territories along the coast” (Cei 1977:17).

Taxonomic and distributional notes:

Bocage (1895b) described *Bufo dombensis* (Bocage, 1895) based on eighteen specimens, the whereabouts of only some are now known. Poynton (1964 in Poynton and Broadley 1988) considered *B. dombensis* to be subspecies of *Bufo vertebralis* Smith 1842 (Frost 1985), an interpretation that was not followed in later works (Poynton and Broadley 1988). Perret (1976a) studied the type specimens in Museu Bocage and found two of the syntypes, which were later destroyed in the fire in Lisbon in 1978.



MAP 9. Distribution of *Poyntonophrynus dombensis* in Angola.

***Poyntonophrynus grandisonae* (Poynton and Haacke, 1993) GRANDISON’S TOAD (Endemic)**

Bufo grandisonae Poynton and Haacke 1993:11. Holotype: TM 40150 (collector W. D. Haacke). Type locality: “5 km E of Assunção, Mossamedes District” (Poynton and Haacke 1993:11), [= 5 km E of Assunção, Namibe] Namibe Province, Angola.

Bufo grandisonae: Ruas (1996:22), Channing (2001:73).

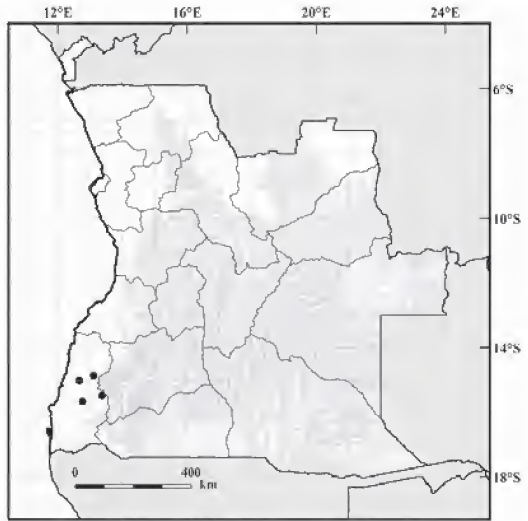
Poyntonophrynus grandisonae: Frétey et al. (2011:24), Frost (2016).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 10): The species is known only from Namibe Province from coastal regions on granite inselbergs (Poynton and Haacke 1993; Channing 2001; Frost 2016). **Namibe:** “5 km E of Assunção” [-14.86667, 13.10000] (Poynton and Haacke 1993:11; Ruas 1996:22); “Caraculo” [-15.01667, 12.66667] (Poynton and Haacke 1993:11; Ruas 1996:22); “Salona river, 2 km N of Cainde” [-15.48333, 13.36667] (Poynton and Haacke 1993:11; Ruas 1996:22); “20 km W of Virei” [-15.66667, 12.76667] (Poynton and Haacke 1993:11; Ruas 1996:22).

Taxonomic and distributional notes: This species exhibits the features of the *Poyntonophrynus* “vertebralis group,” and while resembling *P. dombensis* (Bocage, 1895a), it differs in several morphological traits (Poynton and Haacke 1993; Channing 2001).



MAP 10. Distribution of *Poyntonophrynus grandisonae* in Angola.

***Poyntonophrynus kavangensis* (Poynton and Broadley, 1988)**

KAVANGO TOAD

Bufo kavangensis Poynton and Broadley 1988:472, fig. 1. Holotype: NMZB 19074 (collector H.D. Jackson).

Type locality: “Khwai River, Botswana.”

Bufo kavangensis: Poynton and Haacke (1993:13), Ruas (1996:22, 2002:142), Channing (2001:80).

Poyntonophrynus kavangensis: Frétey et al. (2011:24), Frost (2016).

Global conservation status (IUCN):

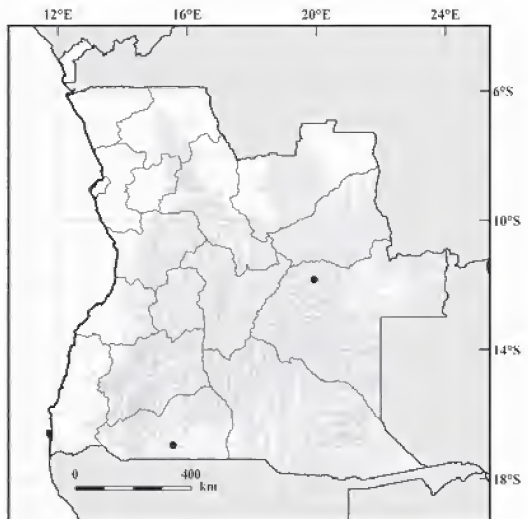
Least Concern.

Global distribution: The species is known from southwestern Angola to northern Namibia and adjacent Botswana and Zimbabwe. It is likely to occur in adjacent Zambia.

Occurrences in Angola (Map 11): The species occurs in southern Angola near the Namibian border, and there is one published record further north. **Moxico:** “Calombe, Luso” [-11.83333, 19.93333] (Ruas 1996:22, 2002:142). **Cunene:** “23 km NW of Pereira de Eça – Roçadas” [-16.95000, 15.56667] (Poynton and Haacke 1993:13; Ruas 1996:22).

Taxonomic and distributional notes:

When describing *Bufo kavangensis*, Poynton and Broadley (1988) mentioned that its distribution extends across northern Zimbabwe,



MAP 11. Distribution of *Poyntonophrynus kavangensis* in Angola.

northern Botswana, northern Namibia, and neighboring southern Angola. The record by Ruas (1996) is from further north in “Calombe,” which calls into question the identification of the specimen. However, Ruas (1996) noted that this northern extension might relate to the historical distribution of the Kalahari sands. This species is known from temporary pools and flooded grasslands (Poynton and Broadley 1985a; Poynton and Haacke 1993; Channing 2001).

Genus *Schismaderma* Smith, 1849

Schismaderma carens (Smith, 1848)

AFRICAN RED TOAD

Bufo carens Smith 1848: pl. 68. Syntypes: BMNH 65.5.11.124–126, 58.11.25.91–93 (collector A. Smith).

Type locality: “Interior of Southern Africa” *vide* Frost (1985:76).

Bufo carens: Laurent (1964a:131), Poynton (1964:60), Cei (1977:16), Poynton and Broadley (1988:84).

Schismaderma carens: Frost (1895:76, 2016), Ruas (1996:22), Channing (2001:103), Frétey et al. (2011:24).

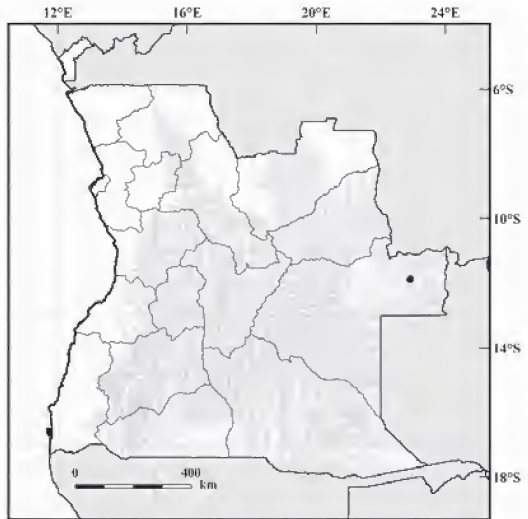
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southwestern Kenya to eastern Angola, southeast through Zimbabwe to eastern South Africa and along Botswana border.

Ocurrences in Angola (Map 12): The species is only known from “Cazombo,” in Moxico Province. **Moxico:** “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:131; Ruas 1996:22; Channing 2001:104). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17).

Taxonomic and distributional notes:

This monotypic genus was reviewed by Poynton (1964) and Poynton and Broadley (1988). It is a widely distributed species found in savannas and common around human settlements (Channing 2001).



MAP 12. Distribution of *Schismaderma carens* in Angola.

Genus *Sclerophrys* Tschudi, 1838

Sclerophrys buchneri (Peters, 1882)

BUCHNER'S TOAD

Bufo Buchneri Peters 1882b:147. Holotype: ZMB 10103 (collector M. Buchner). Type locality: “Lunda (Africa occidentalis),” Angola.

Bufo buchneri: Bauer et al. (1995:40).

Bufo funereus: Tandy and Keith (1972:158), Ruas (1996:22, 2002:142).

Amietophrynus buchneri: Frétey et al. (2011:22).

Sclerophrys buchneri: Frost (2016).

Global conservation status (IUCN): Data Deficient.

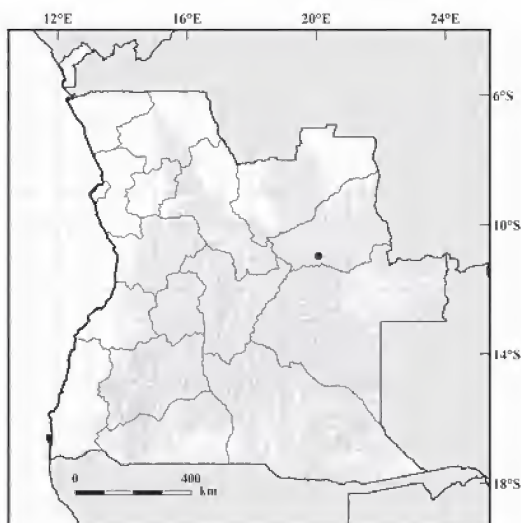
Global distribution: The species is known from eastern Angola, but it may also occur in Republic of the Congo and western Democratic Republic of Congo (Frost 2016).

Ocurrences in Angola (Map 13): Within Angola, this species is known only from the type

locality “Lunda” in eastern Angola. **Lunda Sul:** “Lunda” [-10.96667, 20.06667] (Peters 1882b:146; Bauer et al. 1995:40; Ruas 1996:22, 2002:142).

Taxonomic and distributional notes:

Various authors, including Tandy and Keith (1972), have suggested treating *S. buchneri* as a synonym of *S. funerea* (Bocage, 1866), which was followed by Ruas (1996, 2002). Both the lack of recent data and the uncertainty regarding the taxonomic status of this species indicate that more work is needed on this species. Boulenger (1904) recognized *Bufo decorsei* Mocquard 1903, described from Brazzaville in Republic of Congo, as a junior synonym of *S. buchneri*. If true, this suggests that this species is more broadly distributed in Central Africa. We follow Ohler and Dubois (2016) in using the senior synonym *Sclerophrys* Tschudi, 1838 for all African bufonids recently assigned to *Amietophrynus* Frost et al. 2006.



MAP 13. Distribution of *Sclerophrys buchneri* in Angola.

***Sclerophrys funerea* (Bocage, 1866)**

ANGOLAN TOAD

Bufo funereus Bocage 1866a:56 1866b:77. Holotype: MBL 7.5-363 (collector F. A. P. Bayão) *vide* Perret (1976a:17), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” [= Calandula] Malanje Province, Angola.

Bufo benguelensis Boulenger (1882:299). Syntypes: BMNH 1872.2.15.3. Type locality: “Benguela” [Angola], “Fernando Pó” [= Bioko, Guinea] and “West Afrika.”

Bufo funereus: Bocage (1882a:304, 1895a:186, 1897a:205), Ferreira (1904:114, 1906:166), Monard (1937a:27, 1938:55, 79), Mertens (1937a:18), Themido (1941:2), Laurent (1950a:13, 1954a:71), Loveridge (1957:311), Schmidt and Inger (1959:20), Perret (1976a:17), Cei (1977:16, 17), Frost (1985:45), Ruas (1996:21, 2002:142), Channing (2001:69).

Bufo funereus funereus: Laurent (1964a:131).

Amietophrynus funereus: Frétey et al. (2011:23), Channing et al. (2012:129).

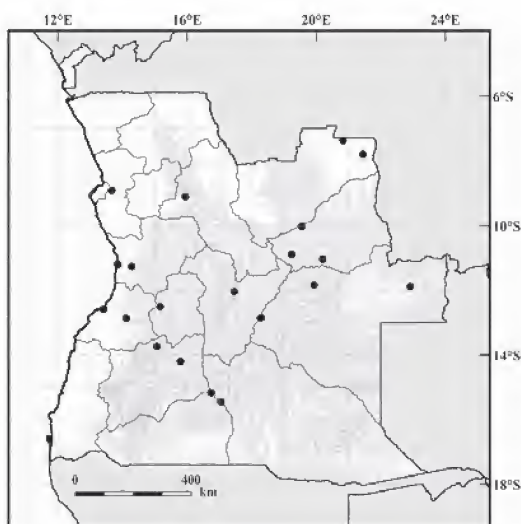
Sclerophrys funerea: Frost (2016), Conradie et al. (2016:12).

Global conservation status (IUCN):

Least Concern.

Global distribution: The species is known from West-Central Africa from Gabon to Uganda, Burundi and Rwanda, southward to Democratic Republic of Congo and Angola.

Occurrences in Angola (Map 14): Reports for this species range across much of Angola, extending from the southwestern to northeastern regions. **Bengo:** “Cabiri” [-8.91667, 13.66667] (Ferreira 1904:114; Monard



MAP 14. Distribution of *Sclerophrys funerea* in Angola.

1938:55). **Lunda Norte**: “Dundo” [-7.36667, 20.83333] (Laurent 1950a:13; Ruas 1996:21); “Muita, Luembe E (Muíta)” [-7.80000, 21.45000] (Laurent 1950a:13; Ruas 1996:21, 2002:142). **Lunda Sul**: “Alto Cuílo, rives du Cuílo, Lunda” [-10.01667, 19.55000] (Laurent 1964a:131; Ruas 1996:22, 2002:142); “Dala” [-11.03333, 20.20000] (Monard 1938:55, 79; Ruas 1996:21, 2002:142); “Alto Chicapa, Lunda” [-10.88333, 19.23333] (Laurent 1964a:131; Ruas 1996:22, 2002:142). **Kwanza Sul**: “Novo Redondo” [-11.20000, 13.85000] (Ferreira 1904:114; Monard 1938:55; Ruas 1996:21, 2002:142); “Gumba” [-11.26667, 14.28333] (Ferreira 1904:114; Monard 1938:55; Ruas 1996:21, 2002:142); “Lembu (Lembe)” [-12.86667, 14.11667] (Ferreira 1904:114; Monard 1938:55; Ruas 1996:21, 2002:142). **Malanje**: “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:56, 1866b:77, 1882a:304, 1895a:186, 1897a:205; Loveridge 1957:311; Perret 1976a:17; Frost 1985:45, 2016; Ruas 1996:21, 2002:142). **Moxico**: “Calombe, Luso” [-11.83333, 19.93333] (Ruas 1996:22, 2002:142); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:131; Ruas 1996:22). **Bié**: “General Machado” [-12.03333, 17.46667] (Mertens 1937a:18). **Huambo**: “Serra do Moco (Luimbale)” [-12.50000, 15.16667] (Laurent 1954a:71; Ruas 1996:21, 2002:142). **Benguela**: “Benguella” [-12.58333, 13.41667] (Boulenger 1882:299; Loveridge 1957:311). **Huíla**: “Caconda” [-13.73333, 15.06667] (Bocage 1882a:304, 1895a:186, 1897a:205; Monard 1938:55; Themido 1941:2; Perret 1976a:17; Ruas 1996:21, 2002:142); “Mukoti” [-14.20000, 15.80000] (Monard 1937a:27, 1938:55, 79; Ruas 1996:21, 2002:142). **Cunene**: “Ruisseau Mbalé (Rio Bale)” [-15.16667, 16.75000] (Monard 1937a:27, 1938:55, 79; Ruas 1996:21, 2002:142). **Cuando Cubango**: “Kakindo (Caquindo)” [-15.45000, 17.05000] (Monard 1937a:27, 1938:55, 79; Ruas 1996:21, 2002:142); “Cubango system around the villages of Kakindo [= Caiundo] and Mbale” [-12.85000, 18.29028] (Conradie et al. 2016:12). **Undetermined Locality**: “without precise locality” (Ferreira 1906:116); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16); “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes: The species was noted as new by Bocage in two different papers (1866a,b), both of which appeared in the November 1866 issue of the same journal. Unlike many of the *nomina* in 1866a, however, that of *Bufo funereus* is a *nomen nudum* as there is no description. Boulenger (1882) described a new species, *Bufo benguellensis*, based on one individual from “Benguela” sent to him by Bocage as well as two other specimens from “Fernando Po” and “W. Africa”; Bocage (1895a) later synonymized *B. benguellensis* with *B. funereus*. The species *Sclerophrys buchneri* (Peters, 1882) is also sometimes treated as conspecific (Tandy and Keith 1972). Schmidt and Inger (1959) provided a map with the distribution of *Bufo funereus* in Central Africa, although they did not provide information about specific localities.

Sclerophrys garmani (Meek, 1897)

GARMAN’S TOAD

Bufo garmani Meek 1897:176. Syntypes: FMNH 415, MCZ 19082 [2 specimens] (collector Field Museum East African Expedition). Type locality: Haili [= Haileh], southeast of Berbera, Somalia.

Bufo regularis humbensis Monard 1937a:26. Syntypes: MNHC 90.00098-99 [2 specimens] (collector A. Monard) and MNHB 23712. Type locality: “Mulondo” (Monard 1937a:26), Angola.

Bufo regularis humbensis: Monard (1938:78), Barbour and Loveridge (1946:84), Frade (1963:254).

Bufo garmani: Tandy and Keith (1972:142, 159), Frost (1985:46), Largen (2001:315).

Bufo regularis sensu stricto: Ruas (1996:21).

Bufo gutturalis: Ruas (2002:141).

Amietophrynus garmani: Frétey et al. (2011:23).

Sclerophrys garmani: Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: *Sclerophrys garmani* is known from disjunct populations in East Africa

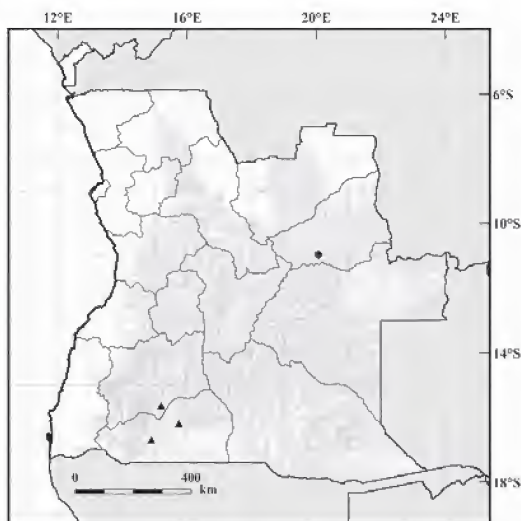
from Ethiopia and northern Somalia, Angola, south to northeastern parts of South Africa, and the eastern Caprivi Strip of Namibia.

Occurrences in Angola (Map 15): The species occurs in southern and eastern Angola.

Moxico: “Rio Calombe (Reserva da Palanca Negra)” [-11.83333, 19.93333] (Ruas 2002:141). As *Sclerophrys garmani humbensis* (plotted as triangles): **Huíla:** “Mulondo” [-15.63333, 15.20000] (Monard 1937a:26, 1938:78; Barbour and Loveridge 1946:84; Ruas 1996:21). **Cunene:** “Mupa” [-16.18333, 15.75000] (Monard 1937a:26, 1938:78; Ruas 1996:21); “Humbe (Humbe)” [-16.68333, 14.90000] (Monard 1937a:26, 1938:78; Ruas 1996:21). **Undetermined Locality:** “western subregion and Angolan highlands (Angola coastal or watersheds)” (Frade 1963:254).

Taxonomic and distributional notes:

Monard (1937a) originally described a new subspecies of *Bufo regularis* Reuss, 1833 based on specimens from “Molundo,” giving it the name *Bufo regularis humbensis* Monard, 1937. These specimens were deposited in the Musée d’histoire naturelle de La Chaux-de-Fonds, Switzerland, though Barbour and Loveridge (1946) also reported one cotype (MCZ A-23712) from “Molundo.” Ruas (1996) identified *B. r. humbensis* as *Bufo regularis sensu stricto*, however she noted that some records identified as *B. regularis* may instead correspond to other *Bufo* (= *Sclerophrys*) species (following Tandy and Keith, 1972). Ruas (1996) recognized *S. humbensis* as a synonym of *S. garmani* rather than *S. regularis*. If *S. garmani* is restricted to northeastern Africa (Largen 2001), then Angolan specimens would either represent a relatively isolated population located near the Namibian border (Tandy and Keith 1972), correspond to another species such as *S. poweri*, or represent an undescribed species. Channing (2001) did not include *A. garmani* among the species of Angola, in contrast to both Frétey et al. (2011) and Frost (2016).



MAP 15. Distribution of *Sclerophrys garmani* in Angola.

***Sclerophrys gutturalis* (Power, 1927)**

GUTTURAL TOAD

Bufo spinosus Bocage 1867a:845. Holotype: MBL 324 (collector J.A. d’Anchieta), not located by Perret (1976a:18), destroyed by fire 18 March 1978. Type locality: “Benguella,” later corrected to “Dombe, Benguella, Angola,” by Perret (1976a:18). Preoccupied by *Bufo spinosus* Daudin, 1803.

Bufo regularis gutturalis Power 1927:416, Pl. 21, fig. 2. Syntypes: MCZ A-15403 and MMK [originally 4 specimens but now presumably 3] (collector J.H. Power). Type locality: “Lobatsi” and “Kuruman” Botswana-Northern Cape Province border, South Africa.

Bufo spinosus: Bocage (1867b:227), Loveridge (1936a:82).

Bufo regularis: Boulenger (1882:299), Bocage (1895a:185), Barbour (1911:135).

Bufo regularis gutturalis: Power (1927:416).

Bufo regularis regularis: Loveridge (1957:310).

Bufo gutturalis: Tandy and Keith (1972:159), Perret (1976a:18), Poynton and Broadley (1988:452), Poynton and Haacke (1993:13), Ruas (1996:21, 2002:141), Channing (2001:74).

Amietophrynus gutturalis: Frétey et al. (2011:23), Channing et al. (2012:130).

Sclerophrys gutturalis: Frost (2016), Conradie et al. (2016:12).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southeastern Uganda eastward to coastal Kenya and Tanzania, south through Mozambique to KwaZulu-Natal. Also present in Swaziland, Botswana, northern Namibia, and Angola.

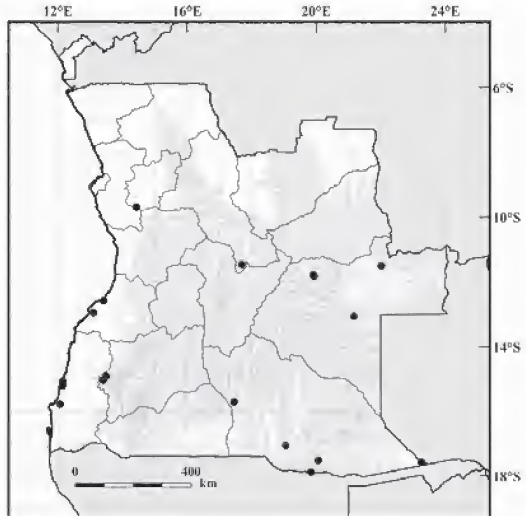
Occurrences in Angola (Map 16): The species is distributed across the middle of Angola, from the coast to the country's eastern border with Zambia and the Democratic Republic of Congo. **Kwanza Norte:** “Dondo, bank of Quanza River” [-9.68333, 14.43333] (Poynton and Haacke 1993:13; Ruas 1996:21, Ruas 2002:142). **Malanje:** “Reserva da Palanca Preta (Rio Caluando)” [-11.46667, 17.70000] (Ruas 1996:21, 2002:141). **Moxico:** “Lago Dilolo” [-11.50000, 22.01667] (Ruas 1996:21, 2002:141); “Luso” [-11.78333, 19.91667] (Ruas 2002:141); “Reserva da Palanca Preta (Rio Calombe)” [-11.83333, 19.93333] (Ruas 1996:21, 2002:141); “Luvuei” [-13.06667, 21.16667] (Ruas 1996:21, 2002:141). **Benguela:** “Benguella (Benguela)” [-12.58333, 13.41667] (Bocage 1867a:845; Loveridge 1936a:82, 1957:310; Ruas 1996:21, 2002:142); “Dombe” [-12.95000, 13.10000] (Bocage 1895a:185; Perret 1976a:18). **Huíla:** “Sá da Bandeira” [-14.91667, 13.50000] (Ruas 1996:21, 2002:141); “Humpata” [-15.03333, 13.40000] (Poynton and Haacke 1993:13; Ruas 1996:21, 2002:142). **Namibe:** “Mosamedes” [-15.20000, 12.15000] (Bocage 1867b:277); “Cima/Saco do Giraul” [-15.06667, 12.15000] (Poynton and Haacke 1993:13; Ruas 1996:21; 2002:142); “Rio Coroca” [-15.78333, 12.06667] (Poynton and Haacke 1993:13; Ruas 1996:21, 2002:142). **Cuando Cubango:** “Cubango basin (2)” [-15.70452, 17.45897] (Conradie et al. 2017:8-9, 12); “Cubango basin (29)” [-17.87291, 19.83333] (Conradie et al. 2017:9-10, 12); “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2017:9-10, 12); “Cuito basin (30d)” [-17.51327, 20.06111] (Conradie et al. 2017:9-10, 12). “Cuito basin (32)” [-17.04880, 19.05333] (Conradie et al. 2017:9-10, 12); “Cuando basin (44)” (Conradie et al. 2017:12); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2017:9-10, 12).

Taxonomic and distributional notes: The nomen *Bufo spinosus* Bocage, 1867 was preoccupied by the Iberian Spiny-toad (Daudin 1803) (Loveridge 1936). Prior to this recognition, it had been considered a synonym of *Bufo regularis* Reuss, 1833 by Boulenger (1882) and Bocage (1895a). Power (1927) described this taxon as the subspecies *Bufo regularis gutturalis* based on material from the border of Botswana and the Northern Cape. This taxon was later elevated to full species by Tandy and Keith (1972), and is currently uniformly accepted as a valid species (Channing 2001; du Preez and Carruthers 2009; Frost 2016; Conradie et al. 2016).

Sclerophrys lemairii (Boulenger, 1901)

LEMAIRE'S TOAD

Bufo lemairii: Boulenger 1901:1, Pl. 1, fig. 1. Holotype: not stated, but presumably originally in MRAC (collector C. Lemaire). Type locality: “Pweto, sur le lac Moero” [= Pweto, Moero Lake], Democratic Republic of Congo.



MAP 16. Distribution of *Sclerophrys gutturalis* in Angola.

Bufo lemairei: Laurent (1950a:13, 1964a:131), Cei (1977:16).

Bufo lemairii: Poynton and Broadley (1988:464), Frost (1985:51), Haacke (1982a:11), Ruas (1996:21), Channing (2001:82).

Amietophrynus lemairii: du Preez and Carruthers (2009:144), Frétey et al. (2011:23).

Sclerophrys lemairii: Frost (2016), Conradie et al. (2016:12).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from the Okavango Delta of northern Botswana, western Zambia and adjacent areas of eastern and northeastern Angola. It also occurs in the Caprivi Strip of Namibia. The Democratic Republic of Congo and Republic of Congo appear to be the northern limits of the species.

Occurrences in Angola (Map 17): The

species occurs in northeastern Angola. **Lunda Norte:** “Muita, Luembe E (Muíta)”

[-7.80000, 21.45000] (Laurent 1950a:13; Ruas

1996:21). **Lunda Sul:** “Alto Chicapa, humidi-

herbosa des sources du Tchimboma affl. Rive

gauche du Cuango-Muqué, Lunda (Rio Chim-

boma)” [-10.76667, 19.20000] (Laurent

1964a:131; Ruas 1996:21); “Alto Chicapa,

sources du Cuílo, patie sans forêt riveraine,

Lunda (Rio Cuílo)” [-10.88333, 19.23333]

(Laurent 1964a:131; Ruas 1996:21). **Moxico:**

“Rive du lac Calundo (Lago Calundo)”

[-11.80000, 20.86667] (Laurent 1964a:131;

Ruas 1996:21); “Cazombo” [-11.88333,

22.91667] (Laurent 1964a:131; Haacke

1982a:11; Ruas 1996:21). **Cuando Cubango:**

“Cubango basin (7a)” [-14.42966, 17.82658]

(Conradie et al. 2016:8-9, 12); “Cubango basin (7b)”

[-14.43377, 17.82957] (Conradie et al.

2016:8-9, 12); “Cuito basin (30a)” [-17.50875,

20.06594] (Conradie et al. 2016:9-10, 12); “Cuito

basin (30d)” [-17.51327, 20.06111] (Conradie et al.

2016:9-10, 12); “Cuito basin (31)” [-17.46777,

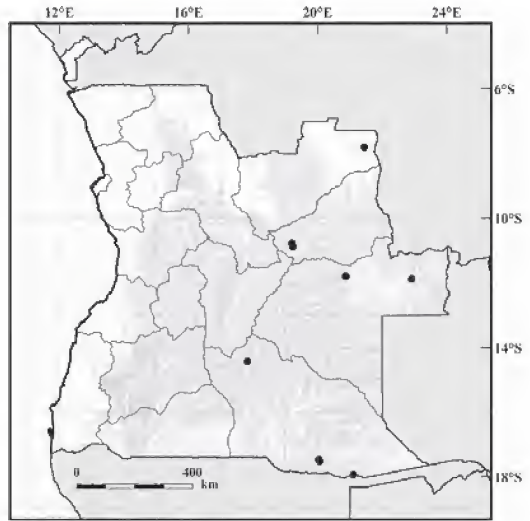
20.03333] (Conradie et al. 2016:9-10, 12); “Cuito

basin (63)” [-17.93611, 21.10269] (Conradie et

al. 2016:9, 12). **Undetermined Locality:** “areas of forest and savanna in north and northeast Ango-

la” (Cei 1977:169).

Taxonomic and distributional notes: None.



MAP 17. Distribution of *Sclerophrys lemairii* in Angola.

Sclerophrys poweri (Hewitt, 1935)

POWER'S TOAD

Bufo regularis poweri Hewitt 1935:293. Syntypes: AMG? [5 specimens] (collector J.H. Power), probably lost, *fide* Conradie et al. (2015:66). Type locality: “Kimberley,” Northern Cape Province, Republic of South Africa, *fide* Conradie et al. (2015:66).

Bufo garmani: Tandy and Keith (1972:159).

Bufo poweri: Channing (2001:91), Pickersgill (2007a:521).

Amietophrynus poweri: Frétey et al. (2011:23), Channing et al. (2012:135), Channing et al. (2013a).

Sclerophrys poweri: Frost (2016), Conradie et al. (2016:14).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is found in arid southwestern Africa, from extreme southern

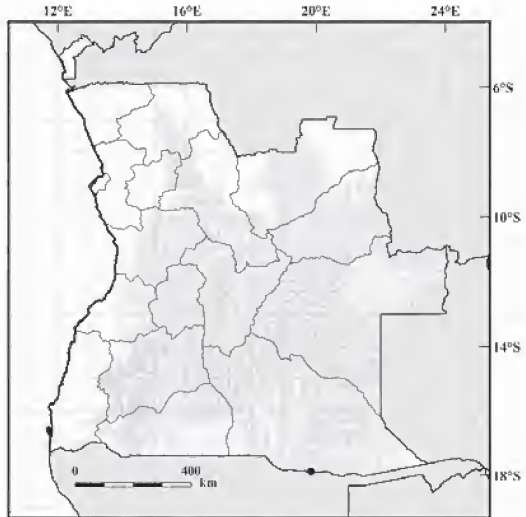
Angola, through northwestern southern Africa, including Namibia, Botswana and western Zimbabwe.

Ocurrences in Angola (Map 18): The species occurs in the extreme southern Angola. Cuando Cubango: “Angola side of the Cubango River near Calai (29)” [-17.87291, 19.83333] (Conradie et al. 2016:9-10, 14).

Taxonomic and distributional notes:

Tandy and Keith (1972) considered this species to be a member of *Bufo regularis* group and a synonym of what is now recognized as *Sclerophrys garmani* (Meek, 1897). Due to its similarities with *S. garmani*, Poynton and Broadley (1988) suggested that *poweri* might be conspecific with *Bufo pseudogarmani* Hulselmans, 1969, although they chose to retain it as a synonym of *garmani*. Pickergill (2007a) considered *S. pseudogarmani* a synonym of *S. poweri* and suggested that southern African populations should be referred to *poweri*.

According to M. Largen, J. Poynton, L. Mazibuko and M. Tandy (pers. comm. in Channing et al. 2013a), the eastern limit of the distribution of *S. poweri* is uncertain due to remaining confusion with *S. garmani*. Whereas Channing (2001) did not consider *S. garmani* to occur in Angola, he did recognize populations from southernmost Angola as *S. poweri*. Recently, Conradie et al. (2016) cited a single specimen collected in Cuando Cubango Province, which represents the first record for Angola, although it is expected to be more widely distributed in southern and eastern Angola.



MAP 18. Distribution of *Sclerophrys poweri* in Angola.

***Sclerophrys pusilla* (Mertens, 1937)**

MERTENS' STRIPED TOAD

Bufo cinereus Hallowell 1844:169. Name preoccupied by *Bufo cinereus* Schneider, 1799 = syn. *Bufo bufo* (Linnaeus, 1758).

Bufo maculatus Hallowell 1854:101. Neotype: BMNH 1984.163 *fide* Poynton et al. (2016:83). Replacement name for *Bufo cinereus* Hallowell, 1844. Type locality: “Monrovia, Liberia” *fide* Poynton et al. (2016:83).

Bufo regularis pusillus Mertens 1937:17. Holotype: SMF 22247 (collected by F. Haas). Type locality: “Leta-ba Camp,” Kruger National Park, South Africa *fide* Poynton et al. (2016:84).

Bufo maculatus: Tandy and Keith (1972:159), Poynton and Broadley (1988:460), Channing (1989:1, 2001:84), Poynton and Haacke (1993:13), Pickersgill (2007a:541).

Bufo funereus: Monard (1937a:26, 1938:55, 77, 78).

Bufo pusilus: Cei (1977:17), Lambiris (1988:51).

Bufo maculatus: Ruas (1996:21, 2002:141).

Bufo funereus: Ruas (1996:21, 2002:142).

Amietophrynus maculatus: Frétey et al. (2011:23),

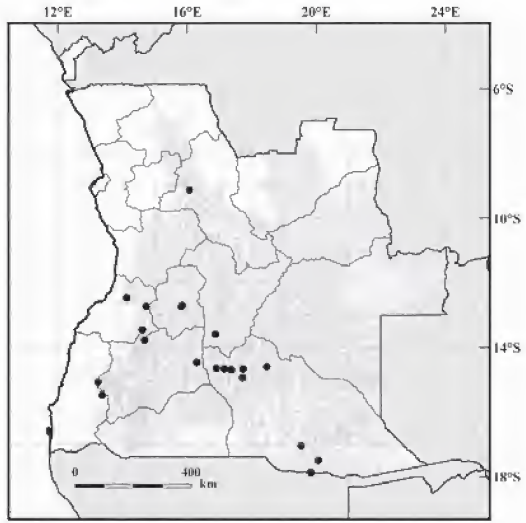
Sclerophrys maculata: Frost (2016), Ceriaco et al. (2016a:19).

Sclerophrys pusilla: Poynton et al. (2016:84), Conradie et al. (2016:14).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from eastern, central and southern Africa from southern and western Cameroon, eastern through the Central African Republic and Sudan south to Mozambique and northern regions of South Africa and Swaziland. The species also occurs in western Zimbabwe, Zambia, and northern Namibia, with a possible wide range in Angola.

Ocurrences in Angola (Map 19): The species occurs in western Angola. **Malanje:** “Duque de Bragança falls (Duque de Bragança)” [-9.13333, 16.06667] (Poynton and Haacke 1993:13; Ruas 1996:21, 2002:141). **Bié:** “Caccuchi River” [-13.593333, 16.879861] (Poynton et al. 2016:89). **Huambo:** “Santo Amaro” [-12.70000, 15.85000] (Monard 1937a:26, 1938:77); “Huambo” [-12.737167, 15.81825] (Poynton et al. 2016:89); “Cubango basin (12a)” [-13.59333, 16.87986] (Conradie et al. 2016:14). **Benguela:** “31 km NE of Sousa Lara-Chila (Bocoio)” [-12.46667, 14.13333] (Poynton and Haacke 1993:13; Ruas 1996:21); “Ebanga” [-12.73333, 14.73333] (Monard 1937a:26, 1938:78); “Monguavalo Farm” [-13.45000, 14.61667] (Poynton and Haacke 1993:13; Ruas 1996:21). **Huíla:** “Kalukembé



MAP 19. Distribution of *Sclerophrys pusilla* in Angola.

(Caluquembe)” [-13.78333, 14.68333] (Monard 1938:55, 76; Ruas 1996:21, 2002:142); “Kuvangu” [-14.46667, 16.30000] (Monard 1937a:26, 1938:77). **Namibe:** “Leba pass, between river and highway” [-15.07033, 13.24381] (Ceríaco et al. 2016a:19); “Cainde” [-15.48333, 13.36667] (Poynton and Haacke 1993:13; Ruas 1996:21; Ceríaco et al. 2016a:19); “16 km W of Vila Nova” (Poynton and Haacke 1993:13; Ruas 1996:21; Ceríaco et al. 2016a:19). **Cuando Cubango:** “Cubango basin (3)” [-14.94277, 17.71863] (Conradie et al. 2016:14); “Cubango basin (6a)” [-14.67155, 17.73525] (Conradie et al. 2016:14); “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:14); “Cubango basin (20)” [-14.67175, 17.15331] (Conradie et al. 2016:14); “Cubango basin (22d)” [-14.64991, 16.90739] (Conradie et al. 2016:14); “Cuito basin (24)” [-14.60622, 18.46722] (Conradie et al. 2016:14); “Cubango basin (29)” [-17.87291, 19.83333] (Conradie et al. 2016:14); “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:14); “Cuito basin (32)” [-17.04880, 19.53333] (Conradie et al. 2016:14); “Cuando basin (41)” (Conradie et al. 2016:14); “Cubango basin (47)” [-14.70214, 17.37806] (Conradie et al. 2016:14); “Cuito basin (62)” [-17.50875, 20.06608] (Conradie et al. 2016:14).

Taxonomic and distributional notes: Tandy and Keith (1972) placed *Bufo pusillus* (*sensu* Pienaar, 1963) in the synonymy of *Sclerophrys maculata* (Hallowell, 1854) due the similar morphology and mating calls. While Hulselmans (1969) questioned this synonymy, immunological evidence (Maxson 1981; Pickergill 2007a) suggested that it is not distinct from *S. maculata*. A recent study conducted by Poynton et al. (2016) established that *S. maculata* is now restricted to West Africa from the Gulf of Guinea eastwards to Cameroon, while *S. pusilla* is found in eastern and southern Africa, including Angola. Conradie et al. (2016) collected some new material from Cuando Cubango Province identified as *S. pusilla*. Monard (1937a, 1938) identified specimens from “Kalukembé” as *Bufo funereus* (Bocage) [= *Sclerophrys funera* (Bocage, 1866)] but we recently determined these to be *S. maculata* (Ceríaco et al. 2016b), which now should be referred to *S. pusilla*.

Sclerophrys regularis* (Reuss, 1833)*AFRICAN COMMON TOAD**

Bufo regularis Reuss 1833:60. Syntypes: SMF 3429, formerly 1298.1c and SMF 1298.d [2 specimens] (collector probably E. Rüppell), the specimens represented by two figures of *Grenouille Ponctuée* from Saint-Hilaire 1809: p. 4, fig. 1, 2 are also syntypes. Type locality: “Aegypten” [= Egypt].

Bufo guineensis: Peters (1877a:618), Bocage (1879b:89).

Bufo pantherinus: Bocage (1866a:56).

Bufo regularis: Boulenger (1882:298, 1905:107), Bocage (1887a:192, 1887b:208, 1895a:185, 1896a:113), Ferreira (1903:114), Monard (1937a:26, 1938:55, 77), Parker (1939:145), Themido (1941:2), Laurent (1954a:70), Inger (1959:540), Cei (1977:16, 17), Lagen (2001:322).

Bufo regularis regularis: Schmidt (1936:128), Loveridge (1936a:81), Monard (1938:78), Mertens (1937a:17, 1938a:429), Laurent (1950a:13), Hellmich (1957a:23), Laurent (1964a:130).

Bufo regularis sensu lato: Ruas (1996:21).

Amietophrynus regularis: Frétey et al. (2011:23), Channing et al. (2012:137), Ceriaco et al. (2014b:669), IUCN SSC Amphibian Specialist Group (2016), Ceriaco et al. (2016b:27).

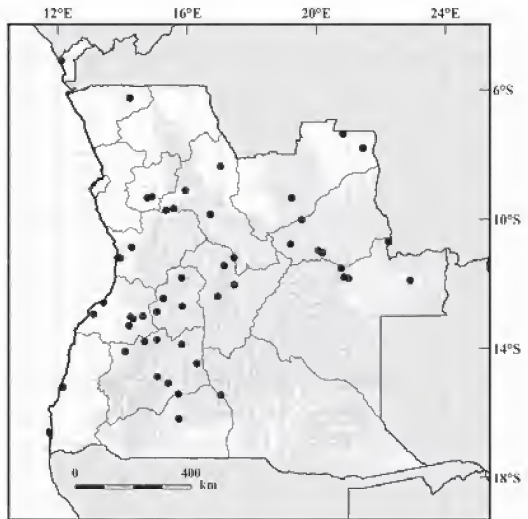
Sclerophrys regularis: Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: This species has among the broadest distributions of all African amphibian species. It is known from northern Africa, western Eritrea and Ethiopia (also included Uganda and southern Kenya), southwards along the western coast from Cameroon to the Democratic Republic of Congo to Angola.

Occurrences in Angola (Map 20): The

species is widespread in Angola, except in the southeast. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877:618). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:192; Ruas 1996:21). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:13, 1954a:70, 1964a:130; Ruas 1996:21); “Muita, Luembe E (Muita)” [-7.80000, 21.45000] (Laurent 1950a:13, 1954a:70; Ruas 1996:21). **Lunda Sul:** “Poste de Luangue, humidiherbosa du ruisseau Katcheleke affl. W. du Luangue, entre le Lunguena et la Tchá-Pemba, Lunda (Posto do Luangue)” [-9.33333, 19.23333] (Laurent 1964a:130; Ruas 1996:21); “Riv. Cuvuembra Alto Cuilo, Lunda (Rio Cavemba)” [-10.01667, 19.55000] (Laurent 1964a:130; Ruas 1996:21); “Lunda” [-10.96667, 20.06667] (Monard 1938:78); “Alto Chicapa, humidiherbosa des sources du Tchimboma affl. Rive gauche du Cuango-Muqué, Lunda (Rio Chimboma)” [-10.76667, 19.20000] (Laurent 1964a:130; Ruas 1996:21); “Dala” [-11.03333, 20.20000] (Monard 1937a:26, 1938:77; Ruas 1996:21). **Kwanza Norte:** “N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1904:113; Monard 1938:55; Ruas 1996:21); “Cazengo” [-9.33333, 14.76667] (Ferreira 1904:113; Monard 1938:55; Ruas 1996:21); **Kwanza Sul:** “Congulu (Congulo)” [-10.86667, 14.28333] (Parker 1936:145; Ruas 1996:21); “Novo Redondo” [-11.20000, 13.85000] (Ferreira 1904:113; Monard 1938:55; Ruas 1996:21); “Furna s/riv. N’Gunza, Novo Redondo (N’Gunza)” [-11.20000, 13.93333] (Laurent 1954a:70; Ruas 1996:21). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Boulenger 1882:298, 1905:107; Bocage 1866a:56; 1895a:185;



MAP 20. Distribution of *Sclerophrys regularis* in Angola.

Ruas 1996:21); “Pungo-Andongo (Pungo Andongo)” [-9.66667, 15.58333] (Bocage 1895a:185; Boulenger 1905:107; Ruas 1996:21); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:669); “Marimba” [-8.36667, 17.03333] (Boulenger 1905:107; Ruas 1996:21) “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:27). **Moxico**: “Teixeira de Sousa, Distr. Villa Luso” [-10.70000, 22.23333] (Mertens 1937a:17); “environs du lac Calundo, rives de la Lumeje, Moxico (Rio Lumege)” [-11.51667, 20.76667] (Laurent 1964a:130; Ruas 1996:21); “Rives du lac Calundo Moxico” [-11.80000, 20.86667] (Laurent 1964a:130; Ruas 1996:21); “Reserve de Chasse de Cameia, 120 km à l’est de Luso (Cameia)” [-11.83333, 21.00000] (Laurent 1964a:130; Ruas 1996:21); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:130; Ruas 1996:21). **Bié**: “Bihé (Bié)” [-12.38333, 16.95000] (Bocage 1879b:78, 1895a:185; Ruas 1996:21); “Gauca” [-11.18333, 17.45000] (Schmidt 1936:128; Monard 1938:55; Ruas 1996:21); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:128; Monard 1938:55; Ruas 1996:21); “General Machado” [-12.03333, 17.46667] (Mertens 1937a:17). **Huambo**: “Bimbi (Bimbe)” [-11.81667, 15.83333] (Monard 1937a:26, 1938:77; Ruas 1996:21); “Cuito, Mt. Moco” [-12.45000, 15.26667] (Parker 1936:145; Ruas 1996:21); “Santo Amaro” [-12.70000, 15.85000] (Monard 1937a:26, 1938:77; Ruas 1996:21); “Cuma” [-12.86667, 15.06667] (Loveridge 1936a:81). **Benguela**: “Benguella (Benguela)” [-12.58333, 13.41667] (Bocage 1895a:185; Ruas 1996:21); “Dombe” [-12.95000, 13.1000] (Bocage 1895a:185); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:23); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:426; Ruas 1996:21); “Cubal da Ganda, Marco de Canavezes (Marco de Canavezes)” [-13.08333, 14.33333] (Laurent 1964a:130; Ruas 1996:21); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:113). **Huíla**: “Caconda” [-13.73333, 15.06667] (Bocage 1895a:185); “Kalukembé (Caluquembé)” [-13.78333, 14.68333] (Monard 1937a:26, 1938:77; Ruas 1996:21); “Sangevé (Sanguve)” [-13.88333, 15.83333] (Monard 1937a:26, 1938:77; Ruas 1996:21); “Quilengues” [-14.10000, 14.08333] (Laurent 1954a:70; Ruas 1996:21); “Kuvangu (Cubango)” [-14.46667, 16.30000] (Monard 1937a:26, 1938:77; Ruas 1996:21); “Kapelongo (Capelongo)” [-14.88333, 15.08333] (Monard 1937a:26, 1938:77; Ruas 1996:21); “Osi (Osse)” [-15.08333, 15.41667] (Monard 1937a:26, 1938:77; Ruas 1996:21); “Kangela (Cangela)” [-15.41667, 15.73333] (Monard 1937a:26, 1938:77; Ruas 1996:21). **Namibe**: “Mossamedes” [-15.20000, 12.15000] (Bocage 1895a:185; Ruas 1996:21). **Cunene**: “Kuvelaï (Cuvelai)” [-15.65000, 15.80000] (Monard 1937a:26, 1938:77; Ruas 1996:21); “Mupa” [-16.18333, 15.75000] (Monard 1937a:26, 1938:77; Ruas 1996:21). **Cuando Cubango**: “Kakindo (Caquindo)” [-15.45000, 17.05000] (Monard 1937a:26, 1938:77; Ruas 1996:21). **Undetermined Locality**: “from almost all localities that he [J. d’Anchieta] visited” (Bocage 1895a:185); “Locomi” (Boulenger 1905:107; Ruas 1996:21); without precise locality (Laurent 1954:70); “Carangigo” (Boulenger 1882:298); “Between Benguela and Bihé” (Boulenger 1905:107). “areas of forest and savanna in the north and northeast of Angola” (Ceia 1977:16); “arid territories along the coast” (Ceia 1977:17).

Taxonomic and distributional notes: *Sclerophrys regularis* (Reuss, 1833) remains a taxonomic challenge. While many specimens from Angola have been identified as *S. regularis*, Ruas (1996) noted that the Angolan records are not representative of *Bufo regularis sensu stricto* and may represent *Bufo maculatus* (Hallowell, 1854) (currently *Sclerophrys pusilla* (Mertens, 1937), see *S. pusilla* account) and/or *Bufo gutturalis* (Power, 1927). *Sclerophrys regularis* is a widely distributed in Africa (IUCN SSC Amphibian Specialist Group 2016), but the boundaries between *S. regularis* and *S. gutturalis* in Angola, the Democratic Republic of Congo, Kenya, Uganda, and Tanzania remain poorly understood. Further studies are needed to clarify the distribution and the known range should be regarded as provisional. Ruas (1996) cited several localities (e.g., “Huila,” “Bibala,” “Quibula,” “Quindumbo,” “Cahata,” “Dondo,” “Ambaca,” “Catumbela,” “Galanga,”

“Humbe,” “Rio Quando,” “Gambos,” “Capagombe,” and “Massabi”) referring to Bocage (1895a) as a source, although these localities are not cited in Bocage’s work.

Family Microhylidae Günther, 1858 (1843)

Genus *Phrynomantis* Peters, 1867

Phrynomantis affinis Boulenger, 1901

SPOTTED RUBBER FROG

Phrynomantis affinis Boulenger 1901:6, pl. 2, fig. 5. Holotype: MRAC (collector C. Lemaire). Type locality: “Pweto, Lake Mweru” (Boulenger 1901:6), Democratic Republic of Congo.

Phrynomantis affinis: Laurent (1964a:156), Cei (1977:17), Poynton and Broadley (1985a:514), Ruas (1996:22).

Phrynomantis affinis: Channing (2001:231), du Preez and Carruthers (2009:284), Frétey et al. (2011:37), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southern Tanzania and the southern Democratic Republic of Congo (former Katanga Province), south to eastern Angola, adjacent Zambia and northern Namibia.

Occurrences in Angola (Map 21): The species occurs in eastern Angola. **Moxico:** “Rives du lac Calundo, Moxico (Lago Calundo)” [-11.80000, 20.86667] (Laurent 1964a:156; Ruas 1996:22). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17).

Taxonomic and distributional notes: While Boulenger (1901) separated *P. affinis* from *P. bifasciatus* based on its smaller eyes and less dilated digits, Poynton and Broadley (1985a) suggested that these were not useful characters for diagnosing these two taxa. Nonetheless, more recent authors, including Channing (2001) and du Preez and Carruthers (2009) have continued to recognize them as distinct.



MAP 21. Distribution of *Phrynomantis affinis* in Angola.

Phrynomantis annectens Werner, 1910

MARBLED RUBBER FROG

Phrynomantis annectens Werner 1910:294. Holotype: ZMB 24829 (collector L. Schultze). “Aar-Rivier” (Werner 1910:294) Aar or Aare River, Namibia.

Phrynomantis annectens: Parker (1936:143), Inger (1959:542), Cei (1977:17), Poynton and Haacke (1993:13), Ruas (1996:22), Channing (2001:232).

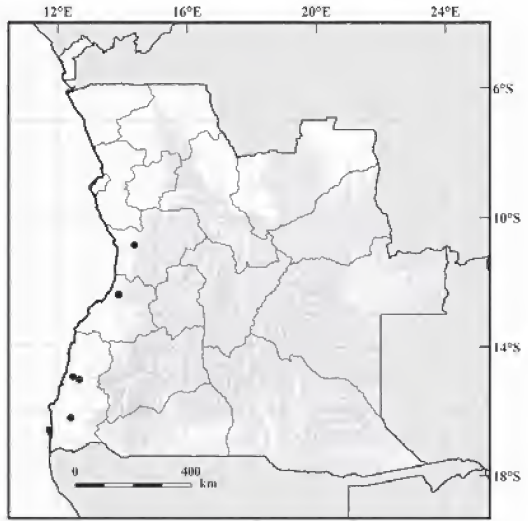
Phrynomantis annectens: Frost (1985:392, 2016), du Preez and Carruthers (2009:286), Frétey et al. (2011:37), Channing et al. (2012:251), Ceriaco et al. (2016a:20).

Global conservation status (IUCN): Least Concern.

Global distribution: The species occurs in arid regions extending from the Namib Desert in Angola, through the rocky mountains of central Namibia, and into the Augrabies area of western Northern Cape Province in South Africa.

Occurrences in Angola (Map 22): The species occurs in southwestern Angola. **Kwanza Sul:** “8 km NE of Novo Redondo, Gabela (Novo Redondo)” [-10.85000, 14.36667] (Poynton and Haacke 1993:13; Ruas 1996:22). **Benguela:** “Morro de Pondo” [-12.38333, 13.88333] (Parker 1936:143; Ruas 1996:22). **Namibe:** “Mutiambo River (Mutiambo)” [-14.93333, 12.46667] (Poynton and Haacke 1993:13; Ruas 1996:22; Ceriaco et al. 2016a:53); “Caraculo” [-15.01667, 12.66667] (Poynton and Haacke 1993:13; Ruas 1996:22; Ceriaco et al. 2016a:53); “Omauha lodge” [-16.19872, 12.40008] (Ceriaco et al. 2016a:20). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17).

Taxonomic and distributional notes: None.



MAP 22. Distribution of *Phrynomantis annectens* in Angola.

Phrynomantis bifasciatus (Smith, 1847)

BANDED RUBBER FROG

Brachymerus bifasciatus Smith 1847b: pl. 63 and two pages of accompanying unnumbered text. Syntypes: BMNH (4 specimens) *fide* Poynton and Broadley (1985a:513) (collector A. Smith). Type locality: “country to the east and north-east of the Cape Colony,” South Africa.

Phrynomantis bifasciata: Boulenger (1882:173), Bocage (1895a:181), Monard (1937a:30, 1938:56, 83), Frade (1963:254).

Phrynomantis bifasciatus: Ferreira (1904:113); Barbour (1911:135), Channing (2001:234), du Preez and Carruthers (2009:288), Frétey et al. (2011:37), Channing et al. (2012:254), Frost (2016).

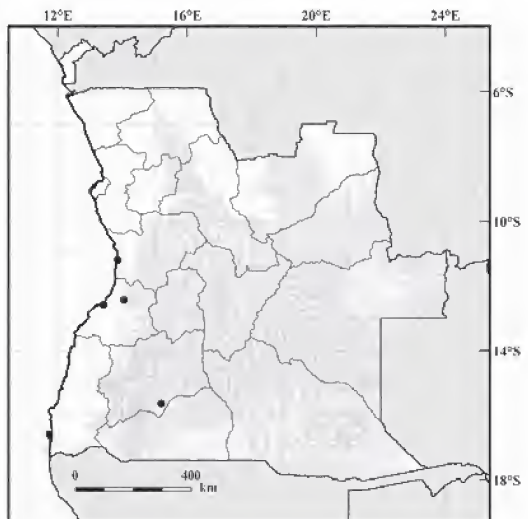
Phrynomeris bifasciatus: Schmidt and Inger (1959:187), Inger (1959:542), Cei (1977:17, 18).

Phrynomeris bifasciatus bifasciatus: Loveridge (1957:355), Poynton and Broadley (1985a:513), Ruas (1996:22).

Global conservation status (IUCN): Least Concern.

Global distribution: The species has a broad distribution, extending from Somalia to the Democratic Republic of Congo, south to South Africa.

Occurrences in Angola (Map 23): The species occurs in southwestern Angola. **Kwanza Sul:** “Chingo (Novo Redondo)” [-11.20000, 13.85000] (Ferreira 1904:113; Monard 1938:56; Ruas 1996:22). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:181; Ruas 1996:22); “Benguella (Benguela)” [-12.58333, 13.41667] (Bocage 1895a:181; Monard 1938:56; Ruas 1996:22). **Huíla:** “Mol-



MAP 23. Distribution of *Phrynomantis bifasciatus* in Angola.

undo” [-15.63333, 15.20000] (Monard 1937a:30, 1938:56, 83; Ruas 1996:22). **Undetermined Locality:** without precise locality (Bocage 1895a:181); “Western subregion and Angolan highlands (Angolan coastal or watersheds)” (Frade 1963:254); “plateaus regions” (Cei 1977:17); “arid territories along the coast” (Cei 1977:18).

Taxonomic and distributional notes: Poynton and Broadley (1985a) regarded this species as conspecific with *Phrynomantis microps* Peters, 1875, which is known from the savannas of West and Central Africa, and is now accepted as a valid species. Ruas (1996) suggested that *Phrynomantis bifasciatus* (Smith, 1847) is likely widely distributed in Angola.

Family Brevicipitidae Bonaparte, 1850

Genus *Breviceps* Merrem, 1820

Breviceps sp.

Breviceps gibosus Bocage (1870:68).

Breviceps gibbosus Bocage (1873b:227).

Breviceps mossambicus: Bocage (1895a:182), Parker (1934:194), Monard (1937a:29, 1938:56, 81), Loveridge (1957:357), Inger (1959:532), Laurent (1964a:156), Cei (1977:17, 18), Gavetti and Andreone (1993:114), Ruas (1996:22).

Rana mossambicus: Hellmich (1957a:30).

Breviceps mossambicus/adspersus: Poynton (1982:67, 1992:68), Frost (1985:356, 2016), Channing (2001:213), du Preez and Carruthers (2009:108), Frétey et al. (2011:27).

Breviceps adspersus: Poynton and Broadley (1985a:523), Conradie et al. (2016:11).

Breviceps mossambicus-adspersus: Ruas (2002:142).

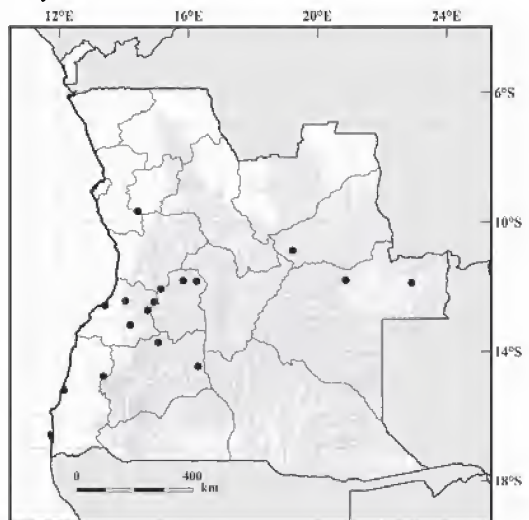
Global distribution: What appears to be a single taxon, though of uncertain identity, ranges across west-central Angola. This may belong to a more widely distributed species in southern Africa, although phylogenetic support for this is not yet available.

Ocurrences in Angola (Map 24):

Records are reported from across western and eastern Angola. **Lunda Sul:** “Alto Chicapa, Lunda” [-10.88333, 19.23333] (Laurent 1964a:156; Ruas 1996:22, 2002:142); “Riv. Luhemba, Alto Chicapa (Rio Luemba)” (Laurent 1964a:156; Ruas 1996:22, 2002:142).

Moxico: “Rives du lac Calundo (Lago Calundo)” [-11.80000, 20.86667] (Laurent 1964a:156; Ruas 1996:22, 2002:142); “Calombe, Luso” [-11.83333, 16.25000] (Ruas 1996:22; 2002:142); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:156; Ruas 1996:22, 2002:142). **Bengo:** “R. Donda, 300 miles inland from St. Paul de Loanda (Rio Donda)” [-9.68333, 14.43333] (Parker 1934:195; Ruas 1996:22, 2002:142).

Huambo: “Bimbi (Bimbe)” [-11.81667, 15.83333] (Monard 1937a:29, 1938:81; Monard 1938:56; Ruas 1996:22, 2002:142); “Galanga” [-12.06667, 15.15000] (Monard 1938:56; Ruas 1996:22, 2002:142). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:182; Parker 1934:195; Monard 1938:56; Ruas 1996:22, 2002:142); “Quindumbo”



MAP 24. Distribution of *Breviceps* sp. in Angola.

[-12.46667, 14.93333] (Bocage 1895a:182; Monard 1938:56; Ruas 1996:22, 2002:142); “Benguela” [-12.58333, 13.41667] (Parker 1934:195; Gavetti and Andreone 1993:114; Ruas 1996:22, 2002:142); “Ebanga” [-12.73333, 14.73333] (Monard 1937a:29, 1938:56, 81; Ruas 1996:22, 2002:142); “Chimbassi” [-13.18526, 14.20061] (Hellmich 1957a:30). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:182; Monard 1938:56; Ruas 1996:22, 2002:142); “Vila-da-Ponte (Kuvangu)” [-14.46667, 16.30000] (Monard 1937a:29, 1938:56, 81; Ruas 1996:22, 2002:142). **Namibe:** “Biballa (Bibala)” [-14.76667, 13.36667] (Bocage 1895a:182; Ruas 1996:22); “Chiyaka District” [vic. -15.08333, 12.73333] (Parker 1934:195); “Mossamedes” [-15.20000, 12.15000] (Bocage 1873b:227). **Undetermined Locality:** without precise locality (Bocage 1870:68); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17); “arid territories along the coast” (Cei 1977:18).

Taxonomic and distributional notes: Identification of Angolan populations of this *Breviceps* species remains unclear. It may be conspecific with *Breviceps adspersus* Peters, 1882 or *B. mossambicus* Peters, 1854. Most authors have considered the Angolan species to be the former. There is a high degree of similarity between the species, and they are easily confused. According to Poynton and Broadley (1985a) and Poynton (1992) this situation appears to be an example of “widespread sympatric hybridization” characterized by Woodruff (1973). If true, it may be difficult to be confident in the identification of preserved specimens, including those with morphological characteristics that are intermediate between the parental species. These authors suggested that Angolan populations referred to *B. mossambicus* are probably an undescribed species requiring further investigation. We consider the Angolan records of *Breviceps gibbosus* (Linnaeus, 1758) cited by Bocage (1870; 1873b) to refer to this species.

Breviceps poweri Parker, 1934

POWER’S RAIN FROG

Breviceps poweri Parker 1934:195. Holotype: BMNH 1947.2.14.89 (collector C. Pitman). Type locality: “Broken Hill (i.e., Kabwe), N. Rhodesia” (Parker 1934:195) [= Kabwe, Zambia] *vide* Poynton and Broadley (1985a:525) and Frost (2016).

Breviceps poweri: Channing (2001:223), du Preez and Carruthers (2009:124), Frétey et al. (2011:27), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Democratic Republic of Congo (former Katanga Province) and adjacent northeastern Angola, east through Zambia and the southern Tanzania south to Mozambique.

Occurrences in Angola: The species occurs in eastern Angola (see notes below).

Taxonomic and distributional notes: Channing (2001) provided a map with Angolan records from Lunda Sul and Moxico Province, near the Zambian border, though the source of these records remains unclear. Frétey et al. (2011) and Frost (2016) cited *B. poweri* from northeastern regions of the country, though without specific locality data, probably on the basis of Channing (2001).

Family Hemisotidae Cope, 1867

Genus *Hemisus* Wagler, 1827

Hemisus guineensis Cope, 1865

GUINEA SNOUT-BURROWER

Hemisus guineensis Cope 1865:100. Holotype: NHMW 1095 (collector unknown) *fide* Häupl and Tiedemann (1978:18). Type locality: Not stated, later restricted to “Guinea,” by inference according to Häupl and Tiedemann (1978:18).

Hemisus guineensis microps Laurent 1972:55, fig. 27. Holotype: MRAC 851 (collector H. Schouteden). Type locality: “Kidada, Lower-Congo,” Democratic Republic of Congo.

Hemisus guttatum: Bocage (1895a:184), Monard (1938:56), Frade (1963:254).

Hemisus marmoratum: Monard (1938:56).

Hemisus marmoratus: Bocage (1887b:208).

Hemisus marmoratus guineensis: Laurent (1950a:15), Hellmich (1957a:28), Loveridge (1957:355).

Hemisus guineensis: Laurent (1964a:147), Häupl and Tiedemann (1978:18), Channing (2001:121), Rödel and Ernst (2003:27), Channing and Howell (2006:126), Onadeko and Rödel (2009:5), Frétey et al. (2011:27), Frost (2016), Ceriaco et al. (2016b:29).

Hemisus guineensis microps: Cei (1977:17, 18), Poynton and Broadley (1985a:533), Poynton (1992:71), Ruas (1996:28), Conradie et al. (2016:11).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola, south to the Caprivi Strip in Namibia, northern Botswana, and Mozambique to the extreme northeast border of South Africa, and also occurs from Senegal to Uganda and Kenya.

Occurrences in Angola (Map 25): The species is found in western and eastern Angola.

Zaire: “St. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:183; Monard 1938:56; Laurent 1972:55).

Kwanza Norte: “Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:28).

Malanje: “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:29).

Lunda Norte: “Muita, Luembe E (Muita)” [-7.80000, 21.45000] (Laurent 1950a:15; Laurent 1972:55; Ruas 1996:28).

Moxico: “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:147; Laurent 1972:55; Poynton 1992:71; Ruas 1996:28).

Namibe: “Intérieur de Mossamedes (Mossamedes)” [-15.20000, 12.15000] (Bocage 1887b:208; 1895a:184; Monard 1938:56; Ruas 1996:28).

Undetermined Locality: “arid subregion, Angola” (Frade 1963:254); “plateaus regions, Angola” (Cei 1977:17); “arid territories along the coast, Angola” (Cei 1977:18).

Undetermined Locality: “arid subregion, Angola” (Frade 1963:254); “plateaus regions, Angola” (Cei 1977:17); “arid territories along the coast, Angola” (Cei 1977:18).

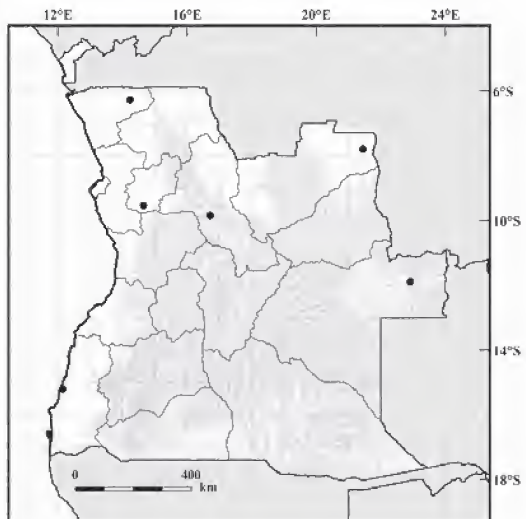
Undetermined Locality: “arid subregion, Angola” (Frade 1963:254); “plateaus regions, Angola” (Cei 1977:17); “arid territories along the coast, Angola” (Cei 1977:18).

Taxonomic and distributional notes: See notes below for *Hemisus marmoratus*.

Hemisus marmoratus (Peters, 1854)

MARBLED SNOUT-BURROWER

Engystoma marmoratum Peters 1854:628. Syntypes: ZMB 3548 [2 specimens] and ZMB 10107, *fide* Bauer et al. (1995:41, 1996:260) (collector W.C.H. Peters). Type locality: “Cabaceira” (Peters 1954:628), Mozambique.



MAP 25. Distribution of *Hemisus guineensis* in Angola.

Hemismus marmoratus: Inger (1959:541), Schmidt and Inger (1959:170), Channing (2001:124), Rödel and Ernst (2003:27), Onadeko and Rödel (2009:5), Frétey et al. (2011:27), Frost (2016).

Hemismus marmoratum: Bocage (1887a:183, 1895a:183), Boulenger (1905:107), Monard (1937a:29, 1938:56, 82), Frade (1963:254).

Hemismus sudanense: Boulenger (1882:178).

Hemismus marmoratus (?) *angolensis*: Hellmich (1957a:28).

Hemismus guineensis microps: Laurent (1972:55), Ruas (1996:28).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is widespread in sub-saharan Africa (excluding rainforest areas), extending from Senegal to Ethiopia and Somalia, south into northern South Africa.

Occurrences in Angola (Map 26): The species is found in western and eastern Angola.

Kwanza Norte: “Dondo” [-9.68333, 14.43333] (Bocage 1895a:183; Monard 1938:56; Laurent 1972:55; Ruas 1996:28).

Kwanza Sul: “Semba Acendu” [-9.85000, 16.15000] (Boulenger 1905:107; Monard 1938:56; Laurent 1972:55; Ruas 1996:28).

Bié: “Chitau” [-11.43333, 17.15000] (Laurent 1972:55; Poynton 1992:71).

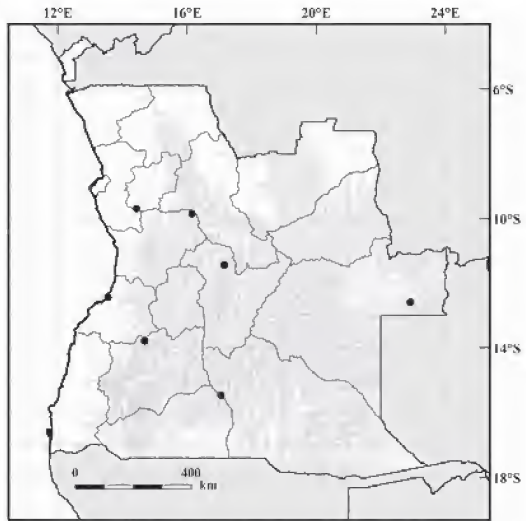
Benguela: “Catumbella (Catumbela)” [-12.43333, 13.55000] (Bocage 1895a:183; Monard 1938:56; Laurent 1972:55; Ruas 1996:28); “Benguella (Benguela)” [-12.58333, 13.41667] (Boulenger 1882:179; Laurent 1972:55; Poynton 1992:71).

Huíla: “Kalukembé (Caluquem-bé)” [-13.78333, 14.68333] (Monard 1937a:29, 1938:56, 82; Laurent 1972:55; Ruas 1996:28).

Cuando Cubango: “Kakindo (Caquindo)” [-15.45000, 17.05000] (Monard 1937a:29, 1938:56, 82; Laurent 1972:55; Ruas 1996:28).

Undetermined Locality: “western subregion and Angolan highlands (Angolan coastal or watersheds)” (Cei 1977:18).

Taxonomic and distributional notes: The delimitation of *Hemismus guineensis* (Cope, 1865) and *Hemismus marmoratus* (Peters, 1854) is more complicated than reflected by the current taxonomy. Both are likely part of a larger complex of morphologically similar species (Rödel and Ernst 2003; Onadeko and Rödel 2009). Both species have been reported to occur in Angola. However, Laurent (1972), in the only synoptic taxonomic review of the genus, explicitly considered Angolan populations to represent what he described as a subspecies of *H. guineensis* (*H. guineensis microps*) that might even represent a distinct species. In West Africa, *H. guineensis* occurs in the forest or near to forests, and is common in grasslands and open woodlands, whereas *H. marmoratus* is usually associated with savannas (Channing 2001; Channing and Broadley 2002; Rödel and Ernst 2003; Channing and Howell 2006; Onadeko and Rödel 2009; Frost 2016). Channing (2001) provided several records for both species in Angola but without information about the specimens corresponding to these records. Vouchers sampled from diverse habitat types and with associated genetic data are needed to evaluate which taxa are present in Angola as well as their distributions.



MAP 26. Distribution of *Hemismus marmoratus* in Angola.

Family Hyperoliidae Laurent, 1943

Genus *Afrixalus* Laurent, 1944

Afrixalus dorsalis (Peters, 1875)

STRIPED SPINY REED FROG

Hyperolius dorsalis Peters 1875:206, pl. 1, fig. 2. Syntype: ZMB 4488 (collector R. Buchholz) *fide* Bauer et al. (1995:44). Type locality: “Boutry” and “Victoria in einem Wassertümpel” restricted to “Boutry” by Mertens (1938b:24), [= mouth of River Butre], Ghana.

Afrixalus dorsalis regularis: Laurent (1964a:149) Cei (1977:17).

Afrixalus dorsalis: Schiøtz (1999:47), Channing (2001:136), Frétey et al. (2011:28), Channing et al. (2012:187), Frost (2016).

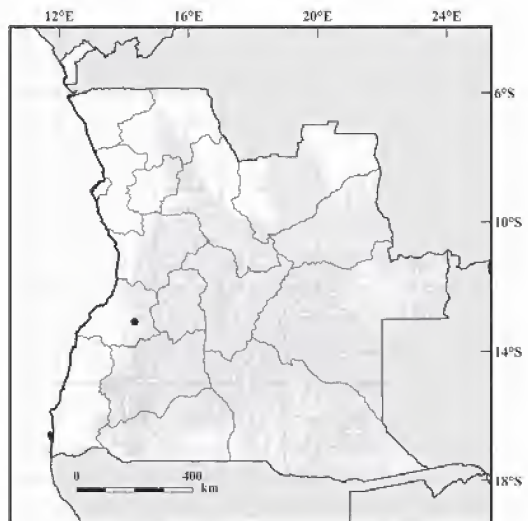
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from West Africa, from eastern Sierra Leone to extreme northern coastal Angola, but it has not been recorded from Benin (Gilles et al. 2006).

Occurrences in Angola (Map 27): The species occurs in coastal Angola. **Benguela:** “Cubal da Ganda (Marco de Canavezes)” [-13.08333, 14.33333] (Laurent 1964a:149). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17).

Taxonomic and distributional notes:

Schiøtz (1999) suggested that this species might extend from coastal Cameroon to Angola. However, these populations vary in phenotype and Angolan populations are somewhat different with some populations having a pale dorsal surface to the crus. For Angola, Schiøtz (1999) considered two valid subspecies, *Afrixalus dorsalis regularis* Laurent, 1951 and *Afrixalus dorsalis leptosomus* (Peters, 1877). The latter was described by Peters (1877a) based on one individual from “Chinchoxo, Cabinda enclave,” which was originally placed in *Hyperolius* (Amiet 2012). Both, Schiøtz (1999) and Amiet (2012) discussed the nomenclatural confusion regarding *leptosomus* as a member of the *fluvovittatus* complex and Frétey et al. (2011) included *Afrixalus dorsalis regularis* and *A. d. leptosomus* as synonyms of the nominate form. In contrast, Frost (2016) considered *A. d. leptosomus* to be a synonym of *Afrixalus quadrivittatus* (Werner, 1908) and *A. d. regularis* to be a synonym of *A. dorsalis*. Channing (2001) provided three records for *Afrixalus dorsalis* in Angola in Benguela Province without detailed information, which probably correspond to previously unpublished museum specimens.



MAP 27. Distribution of *Afrixalus dorsalis* in Angola.

Afrixalus fulvovittatus (Cope, “1860” 1861)

FOUR-LINED SPINY REED FROG

Hyperolius fulvovittatus Cope “1860” 1861:517. Holotype: ANSP 3219 *fide* Malnate (1971:350) (collector possibly Dr. Goheen). Type locality: “Liberia” (Cope “1860” 1861:517).

Rappia fulvo-vittata: Günther (1868 “1869”:479).

Hyperolius fulvovittatus: Noble (1924:252).

Rappia fulvovittata: Boulenger (1882:121), Ferreira (1904:112).

Afrixalus fulvovittatus: Ceia (1977:17), Schiøtz et al. (2013), Frost (2016).

Global conservation status (IUCN):

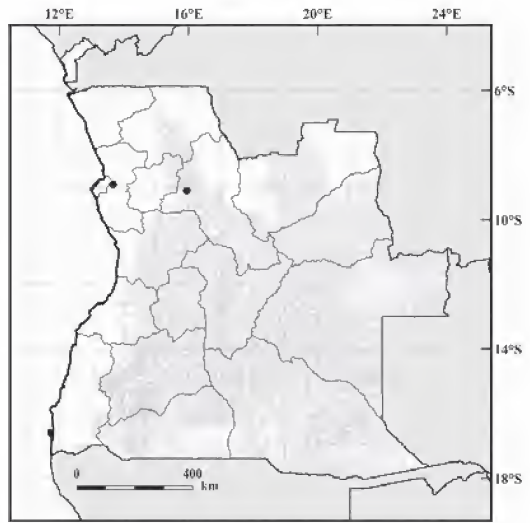
Least Concern.

Global distribution: The species is known from Guinea to western Ivory Coast, south to north-central Cameroon, Republic of Congo and northern Angola.

Occurrences in Angola (Map 28): The species occurs in northern Angola. **Bengo:** “Cabiri” [-8.91667, 13.66667] (Ferreira 1904:112). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Boulenger 1882:121). **Undetermined Locality:** “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes:

The taxonomy of *Afrixalus fulvovittatus* (Cope, 1861) is still unresolved. Some authors, including Frétey et al. (2011), consider it a synonym of the broadly distributed *Afrixalus quadrivittatus* Werner, 1908, whereas others, such as Schiøtz et al. (2013) and Frost (2016), consider this species to have a limited distribution in western Africa, including eastern Sierra Leone, southern Guinea, northern Liberia, and western Ivory Coast. This confusion, as well as the existence of other available names such as *Afrixalus leptosomus* (Peters, 1877), makes unclear the taxonomic status of specimens from Angola. A thorough taxonomic review incorporating genetic data from many populations across Central Africa is sorely needed.



Map 28. Distribution of *Afrixalus fulvovittatus* in Angola.

Afrixalus osorioi* (Ferreira, 1906)*OSORIO'S SPINY REED FROG**

Rappia osorioi Ferreira 1906:162, pl. 1. Syntypes: MHNFCP 017307 [3 specimens] *fide* Ceriaco et al. (2014a:22) (collector F. Newton). Type locality: “Quilombo” (Ferreira 1906:162) Kwanza Norte Province, Angola.

Hyperolius osorioi: Noble (1924:153).

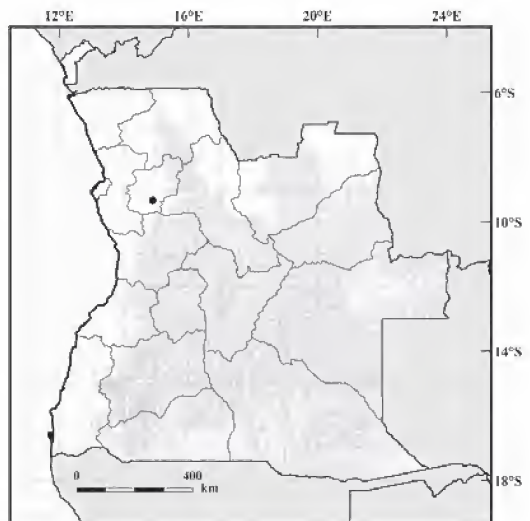
Afrixalus osorioi: Perret (1976b:27), Cei (1977:17), Laurent (1982:24), Frost (1985:222, 2016), Schiøtz (1999:49), Channing (2001:140), Köhler et al. (2005:130), Frétey et al. (2011:28), Ceriaco et al. (2014a:22).

Global conservation status (IUCN):

Least Concern.

Global distribution: The species is distributed from west-central Angola northwards across much of the Congo Basin, western Kenya, and eastern Uganda.

Occurrences in Angola (Map 29): The species has only been recorded from its type locality “Quilombo” in Kwanza Norte Province, although is expected to be more widespread in the west-central plateaus of the country. **Kwanza Norte:** “Quilombo”



MAP 29. Distribution of *Afrixalus osorioi* in Angola.

[-9.33333, 14.90000] (Ferreira 1906:162; Perret 1976b:27; Laurent 1982:24; Frost 1985:222, 2016; Ceríaco et al. 2014a:22; Frost 2016).

Taxonomic and distributional notes: Ferreira (1906) described *Rappia osorioi* based on three specimens, from “Quilombo” collected by Francisco Newton. Laurent (1982) discussed patterns of morphological variation in *A. osorioi* and the minor phenotypic differences from two other Congo Basin species, *Afrivalus equatorialis* (Laurent, 1941) and *Afrivalus leucostictus* (Laurent, 1950). In his discussion of the variation in color and pattern of *A. osorioi*, Laurent noted that “la phenotype représenté par l’holotype” has an elongate rectangular and dark scapular spot. However, the citation provided in this discussion, as well as the list of specimens examined, indicates Laurent was, in fact, referring to the holotype of *Megalixalus fornasinii conigicus* Laurent, 1941 and not the type material described by Ferreira (1906). Perret (1976b) listed three type specimens in Museu do Porto lacking catalog numbers (one holotype and two paratypes) and followed Laurent in recognizing this taxon as conspecific with *M. f. conigicus* (Ceríaco et al. 2014a). Channing (2001) provided two records without specific information that are probably based on museum specimens.

Afrivalus quadrivittatus (Werner, 1908)

FOUR-LINED SPINY REED FROG

Hyperolius leptosomus Peters 1877a:619, pl., figs. 5-5a. Holotype: ZMB 9175 (collector Africanische Gesellschaft) *fide* Bauer et al. (1995:44). Type locality: “Chinchoxo (Westafrika)” (Peters 1877a:611), [= Chinchoxo] Cabinda Province, Angola. Synonymy with *A. fulvovittatus* (Werner, 1908) by Schiøtz (1975:78) and assigned by implication to *A. “quadrivittatus”* by Pickersgill (2007b:23).

Megalixalus leptosomus quadrivittatus Werner 1908 “1907”:1900, pl. 4, fig. 13. Syntypes: NHMW 3723 (collector F. Werner) *fide* Häupl et al. (1994:29). Type locality: “On the Nile near Khor Attar, Sudan” (Werner 1908 “1907”:1900), Sudan.

Megalixalus leptosomus: Boulenger (1882:129).

Hyperolius leptosomus quadrivittatus: Werner (1908 “1907”:1900).

Afrivalus fluvovittatus leptosomus: Loveridge (1957:322).

Afrivalus dorsalis leptosomus: Perret (1976b:19), Laurent (1982:31), Amiet (2012:71).

Afrivalus quadrivittatus: Largen (2001:357), Kölher et al. (2005:131), Frost (2016).

Afrivalus “quadrivittatus”: Pickersgill (2007b:23), Frost (2016).

Global conservation status (IUCN):

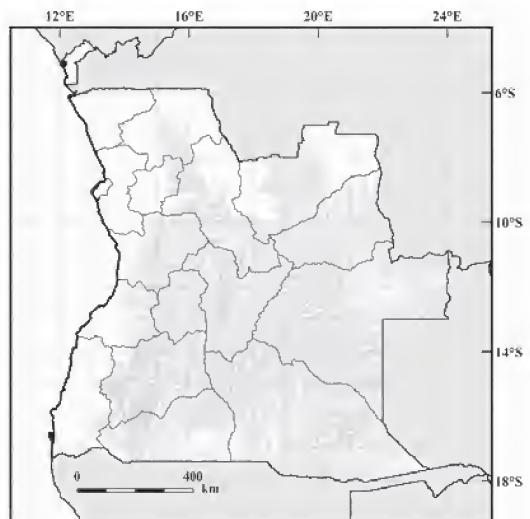
Least Concern.

Global distribution: The species is known from eastern Nigeria to western Ethiopia, southwards through western Tanzania and into northern Angola.

Ocurrences in Angola (Map 30): The species occurs in “Chinchoxo” in the Cabinda enclave, but it is also presumed to occur in northern Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:619; Boulenger 1882:129; Loveridge 1957:322; Perret 1976b:19; Laurent 1982:31; Kölher et al. 2005:132; Amiet 2012:71).

Taxonomic and distributional notes:

The taxonomy and distribution of *A. quadrivittatus* remains controversial. It was removed from synonymy of *Afrivalus fulvovittatus* (Cope, 1861) by Schiøtz (1975) and Kölher et



MAP 30. Distribution of *Afrivalus quadrivittatus* in Angola.

al. (2005), where it had been placed by Laurent (1982) and recently placed again by Frétey et al. (2011). Pickersgill (2007b) suggested that the validity of this species is questionable, which leaves the Angolan records for this species in need of further study.

Afrixalus wittei (Laurent, 1941)

DE WITTE'S SPINY REED FROG

Megalixalus wittei Laurent 1941:127. Holotype: MRAC 11500. Type locality: "Lukafu" (Laurent 1941:127), Democratic Republic of Congo.

Hyperolius fulvovittatus: Bocage (1866a:55).

Rappia fulvovittata: Bocage (1895a:175).

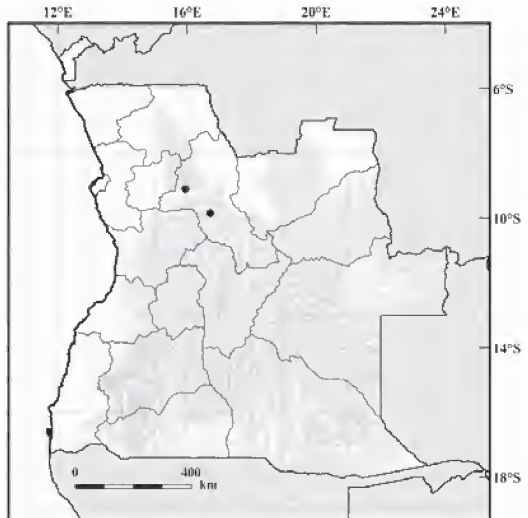
Afrixalus wittei: Perret (1976b:24), Frost (1985:224, 2016), Poynton and Broadley (1987:191), Schiøtz (1999:64), Channing (2001:143), Frétey et al. (2011:27), Ceriaco et al. (2016b:30).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from tropical lowland savannas from the southern Democratic Republic of Congo, northeastern Angola and Zambia.

Occurrences in Angola (Map 31): The species was from some time only known from a single record from "Duque de Bragança" [= Calandula], Malanje Province. It was recently found in Cangandala National Park, in the same region. **Malanje:** "Duque de Bragança" [-9.10000, 15.95000] (Bocage 1866a:55, 1895a:175; Perret 1976b:24); "Cangandala National Park" [-9.84606, 16.72233] (Ceriaco et al. 2016b:30).

Taxonomic and distributional notes: Perret (1976b) considered the specimen from "Duque de Bragança" identified by Bocage as *Hyperolius fulvovittatus* (Bocage 1866a), and later as *Rappia fulvovittata* (Bocage 1895a), to be referable to *Afrixalus wittei* (Laurent, 1941). Through analysis of the morphological diversity in several species of *Afrixalus*, Laurent (1982) argued that *A. wittei* is closely related to *A. osorioi* Ferreira, 1906 (Poynton and Broadley 1987).



MAP 31. Distribution of *Afrixalus wittei* in Angola.

Genus *Cryptothylax* Laurent and Combaz, 1950

Cryptothylax greshoffii (Schilthuis, 1889)

GRESHOFF'S WAX FROG

Hylambates Greshoffii Schilthuis 1889:286, unnumbered fig. Type: UZ by original designation, now possibly deposited in RMNH *vide* Hoogomoed in Frost (1985:205) (collector A. Greshoff). Type locality: "Boma (Congo, W. Africa)" (Schilthuis 1889:284), [= Boma], Democratic Republic of Congo.

Hylambates greshoffii: Frost (1985:205).

Cryptothylax greshoffii: Schiøtz (1999:90), Blackburn and Jackson (2006:358), Frétey et al. (2011:29), Channing et al. (2012:200), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from the forests of southern Cameroon extending into the Democratic Republic of Congo, and south to northern Angola.

Occurrences in Angola: The species occurs in northern Angola. **Uige:** without precise location (Schiøtz 1999:91).

Taxonomic and distributional notes: This forest edge species has been reported from several parts of the Congo Basin, where wetlands are very widespread, and probably represents the center of its dispersion (Amiet 2012). Schiøtz (1999) provided a distribution map of the species with a record in Uíge Province, in northern Angola, although without further detail.

Genus *Hyperolius* Rapp, 1842

Hyperolius adspersus Peters, 1877

SPRINKLED LONG REED FROG

Hyperolius adspersus Peters 1877a:619, pl., figs. 6-6a. Holotype: ZMB 9176 *fide* Laurent (1961:92). Type locality: “Chinchoxo” Cabinda Province, Angola.

Rappia nobrei Ferreira 1904:112. Syntypes: MHNFCP 017292 [2 specimens] (collector F. Newton). Type locality: “Cabiri” Bengo Province, Angola. Considered a junior synonym of *H. adspersus* by Ceriaco et al. (2014a:21).

Hyperolius nasutus adspersus: Laurent (1961:92).

Hyperolius granulatus: Laurent (1964a:155), Ceï (1977:17).

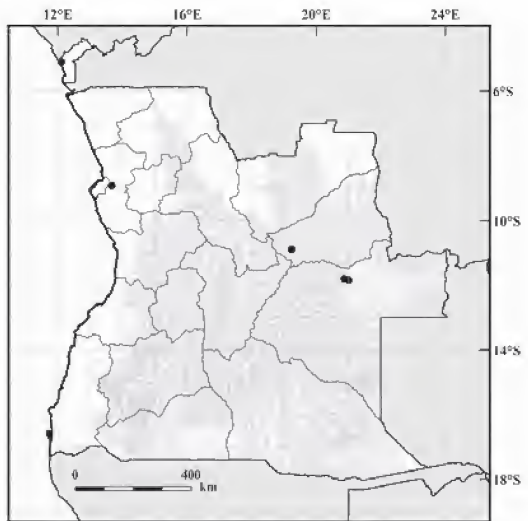
Hyperolius adspersus: Amiet (2005:274), Frétey et al. (2011:29), Channing et al. (2013b:314), Frost (2016).

Hyperolius cf. adspersus: Ceriaco et al. (2014a:21).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southern Cameroon to the lower Congo Basin in Democratic Republic of Congo to northern Angola, including the Cabinda enclave.

Occurrences in Angola (Map 32): The species is known from the type locality “Chinchoxo” and from scattered localities in north-eastern Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:619; Laurent 1961:92; Amiet 2005:275; Channing et al. 2013b:317; Frost 2016). **Bengo:** “Cabiri” [-8.91667, 13.66667] (Ferreira 1904:112; Ceriaco et al. 2014a:21). **Lunda Sul:** “Alto Chicapa galerie forestière des sources du ruisseau Cuílo” [-10.88333, 19.23333] (Laurent 1964a:155). **Moxico:** “Réserve de chasse de Cameia, 120 km à l’est de Luso” [-11.83333, 21.00000] (Laurent 1964a:155); “Rives du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:155).



MAP 32. Distribution of *Hyperolius adspersus* in Angola.

Taxonomic and distributional notes:

This species was described by Peters (1877a) as *Hyperolius adspersus* based on a specimen collected in “Chinchoxo,” in the Cabinda enclave. Ferreira (1904) described *Rappia nobrei* from the type locality “Cabiri” collected by Francisco Newton. This taxon was previously considered as *incertae sedis* in part because of the long lack of study of the type specimens (Frost 2016). A recent study by Ceriaco et al. (2014a) confirmed that this taxon is clearly a member of the genus *Hyperolius* and is plausibly a junior synonym of *H. adspersus*. Previously, *H. adspersus* was considered to be a synonym of *H. nasutus* Günther 1865, but Amiet (2005) removed it from synonymy. This species is part of the taxonomically problematic *Hyperolius nasutus* group, which currently contains 16 recognized species (Channing et al. 2013b; Ceriaco et al. 2014a). Of these 16 species, only three are known to occur near the type locality of *Rappia nobrei*: *Hyperolius adspersus*, *Hyperolius nasutus* Günther, 1865, and *H. benguel-*

lensis (Bocage, 1893) (Channing et al. 2013b; Ceriaco et al. 2014a; see *H. benguellensis* and *H. nasutus* accounts). The syntypes of *R. nobrei* are similar to both *H. adpersus* and *H. benguellensis*, which makes it difficult to determine to which species *Rappia nobrei* should be referred. We here follow Ceriaco et al. (2014a) by considering *R. nobrei* to be a junior synonym of *H. adpersus*. Channing et al. (2013b) considered *Hyperolius granulatus* (Boulenger, 1901), previously associated with *Hyperolius benguellensis* (Bocage, 1893), to be a synonym of *H. adpersus* (Perret 1976a; Schiøtz and Van Daele 2003).

***Hyperolius angolensis* Steindachner, 1867**

ANGOLAN REED FROG

[**Note:** Because of the complexity of the taxonomy of this species we provide additional commentary on its synonymy/chresonymy]

Hyperolius marmoratus Rapp 1842:289, pl. 6, figs. 1–2. Type: Not designated (collector unknown). Type locality: “Natal” [= KwaZulu-Natal], South Africa.

Hyperolius parallelus Günther 1858a:326. Syntypes: BMNH 1947.2.9.41–43 [3 specimens] (collector unknown, probably “Mr. Rich”). Specimens BMNH 1947.2.9.41 and 1947.2.9.42 are depicted in Günther “1858b” 1859: 86, pl. 8, fig. A. Type locality: “Süd-Afrika” later changed to “South Africa” and “Angola” (Günther “1858b” 1859:86) and to “Cape of Good Hope” and “Ambris, Angola” [= Ambriz] by Boulenger (1882:121). Synonymized with *H. marmoratus* by Boulenger (1882:121) and treated as a subspecies by Laurent (1951:38).

Hyperolius marmoratus var. *angolensis* Steindachner 1867:50. Syntypes: NHMW 13487.1–2 *fide* Häupl and Tiedemann (1978:22) (collector F.A.P. Bayão). Type locality: “Angola” (Steindachner 1867:50). Restricted to “Duque de Bragança” [= Calandula] (Ceriaco et al. 2014b:669).

Hyperolius insignis Bocage 1867a:844, fig. 2. Syntypes: MBL T.21-164, 27-167 [2 specimens] (collector J. A. d’Anchieta [Benguella] and P. Barroso [St. Salvador du Congo]), destroyed by fire 18 March 1978. Type locality: “Benguella,” Angola. Corrected by Perret (1976a: 28) to “St. Salvador du Congo” [= M’Banza Congo] and “Novo Redondo” [= Sumbe], Angola. Synonymized with *H. marmoratus* by Boulenger (1882:121) and Perret (1976a:27) and treated as a subspecies by Laurent (1951 “1952”:39). Synonymized with *H. parallelus* by Loveridge (1953a:329).

Hyperolius Toulsonii Bocage 1867a:845, fig. 3. Holotype: MBL T.27-275 (collector M. Toulson), destroyed by fire 18 March 1978. Type locality: “Loanda” [= Luanda], Angola. Synonymized with *H. marmoratus* by Boulenger (1882: 121), recognized as valid by Ahl (1931b:388), and considered a synonym of *H. m. insignis* by Laurent (1952 “1951”:391), and later synonymized with *H. parallelus* (Perret 1976a:27).

Hyperolius huillensis Bocage 1873b:225. Syntypes: MBL 2-166 [4 specimens] (collector J. A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Huilla,” [Angola] (Bocage 1873b:225). Considered a subspecies of *H. marmoratus* by Laurent (1952 “1951”:390).

Hyperolius vermiculatus Peters 1882a:8. Lectotype: ZMB 10050, designated by Laurent (1961:88) (collector von F.W.A. von Mechow). Type locality: “Malange” [= Malanje] (Peters 1882a:8). Considered a subspecies of *H. marmoratus* by Laurent (1952 “1951”:88).

Rappia plicifera Bocage 1893:118. Syntypes: MBL T.22-209 [2 specimens] (collector J. A. d’Anchieta [Caconda] and F. A. P. Bayão [Duque de Bragança]), destroyed by fire 18 March 1978. Häupl and Tiedemann (1978:29) considered NHMW 22895 [2 specimens] as part of the type series. Type locality: “Caconda,” “Duque de Bragança,” Angola (Bocage 1893:118). Synonymized with *H. m. vermiculatus* by Laurent (1952 “1951”:390) and later with *H. parallelus* by Perret (1976a:27).

Rappia marmorata var. *marginata*: Bocage 1895a:164: Type: MBL, specimen number(s) not known (collector F. A. P. Bayão), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” [= Calandula], Angola.

Rappia marmorata var. *taeniolata* Bocage 1895a:164: Syntypes: MBL, specimen numbers not known (collector F. A. P. Bayão [Duque de Bragança], Graça and J. A. d’Anchieta [Huilla] and J. A. d’Anchieta [Caconda and Cahata]), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança,” “Huilla,” “Caconda” and “Cahata” [= Calandula, Huilla, Caconda and Caota], Angola.

Rappia marmorata var. *variegata* Bocage 1895a:164: Syntypes: MBL (collector J. A. d’Anchieta). Type local-

- ity: “Cahata” and “Quindumbo” [= Caota and Quindumbo], Benguela Province, Angola.
- Hyperolius marungaensis* 1931b:351, fig. 226. Holotype: ZMB uncatalogued (collector Böhm). Type locality: “Marunga,” Angola. Considered a subspecies of *H. marmoratus* by Laurent (1961:88).
- Hyperolius decoratus* 1931b:352, fig. 227. Holotype: ZMB uncatalogued, MCZ A-17632 (collectors Brühl and Gleim) – on exchange from ZMB *fide* Barbour and Loveridge (1946:127). Type locality: “Longa” (Ahl 1931a:78, 1931b:352), Angola. Considered a subspecies of *H. marmoratus* by Laurent (1952 “1951”:392).
- Hyperolius microtictus* 1931b:353, fig. 228. Syntypes: ZMB [2 specimens] uncatalogued, ZMB 36100 [2 specimens] (collector unknown). Type locality: “Longa” (Ahl 1931a:80, 1931b:352), Angola. Considered a synonym of *H. m. decoratus* by Laurent (1961:89).
- Hyperolius erythromelanus* Monard 1937a:36. Syntypes: LMC FM [2 specimens] (collector A. Monard). Type locality: “Sangevé” (Monard 1937a:36), [= Sanguéve], Angola. Synonymized with *H. m. huillensis* by Laurent (1952 “1951”:390).
- Hyperolius marmoratus alborufus*: Laurent 1964a:153, fig. 40. Holotype: MD 5679 (collector unknown). Type locality: “Cazombo, Alto Zambeze, Moxico, Angola” (Laurent 1964a:153).
- Hyperolius huillensis*: Bocage (1879c:89).
- Hyperolius insignis*: Bocage (1867a:844, 1887a:191).
- Rappia insignis*: Günther (1869:479).
- Hyperolius marmoratus*: Günther (1864a:480), Bocage (1866a:55, 1886b:74), Peters (1881:150), Noble (1924:253), Schmidt (1936:131), Mertens (1938a:427), Inger (1959:541), Gavetti and Andreone (1993:103), Ceriaco et al. (2014b:669).
- Hyperolius citrinus*: Bocage (1879c:89).
- Hyperolius Toulsonii*: Bocage (1895a:166, 1897a:203), Ferreira (1906:161).
- Rappia marmorata*: Boulenger (1882:121, 1905:109), Bocage (1895a:164, 1896a:113, 1897b:211), Ferreira (1904:112, 1906:160).
- Rappia plicifera*: Bocage (1895a:167, 1897a:203), Ferreira (1897b:241, 1904:112, 1906:161), Häupl and Tiedemann (1978:29), Häupl et al. (1994:34).
- Rana marmorata* var. *huillensis*: Ferreira (1897b:241).
- Hyperolius decoratus*: Loveridge (1936a:106), Monard (1937a:35, 1938:89); Barbour and Loveridge (1946:127).
- Hyperolius vermiculatus*: Monard (1938:88).
- Hyperolius microstictus*: Monard (1937a:35, 1938:90).
- Hyperolius* sp. II (ap. *angolensis*): Monard (1937a:38, 1938:92).
- Hyperolius* sp. III (ap. *angolensis*): Monard (1937a:38, 1938:93).
- Hyperolius* sp. I (ap. *decoratus*): Monard (1937a:37, 1938:92).
- Hyperolius angolensis*: Monard (1937a:36, 1938:90), Channing (2001:148), Conradie et al. (2012a:2), Ceriaco et al. (2016b:31), Conradie et al. (2016:14).
- Hyperolius graueri*: Mertens (1937a:20).
- Hyperolius parallelus*: Peters (1877a:618), Laurent (1943a:14), Ceriaco et al. (2014b:669), Frost (2016).
- Hyperolius marmoratus angolensis*: Laurent (1950a:17, 1954a:80), Frade (1963:254), Laurent (1964a:152), Cei (1977:17), Broadley (1965a:26), Häupl and Tiedemann (1978:22).
- Hyperolius marmoratus albofasciatus*: Loveridge (1953a:350).
- Hyperolius marmoratus parallelus*: Laurent (1961:89), Cei (1977:17).
- Hyperolius marmoratus huillensis*: Laurent (1961:88), Cei (1977:17), Poynton and Haacke (1993:15).
- Hyperolius marmoratus vermiculatus*: Laurent (1961:88).
- Hyperolius marmoratus marungaensis*: Laurent (1961:88), Cei (1977:17).
- Hyperolius marmoratus insignis*: Laurent (1961:89, 1964a:151) Cei (1977:17).
- Hyperolius marmoratus alborufus*: Laurent (1964a:153), Cei (1977:17).
- Hyperolius parallelus alborufus*: Schiøtz (1975:185).
- Hyperolius parallelus pliciferus*: Perret (1976a:27).
- Hyperolius parallelus toulsoni*: Perret (1976a:27).
- Hyperolius parallelus insignis*: Perret (1976a:29).

Hyperolius parallelus huillensis: Perret (1976a:29).

Hyperolius erythromelanus: Frost (1985:210).

Hyperolius parallelus-marginatus subgroup: Schiøtz (1999:217).

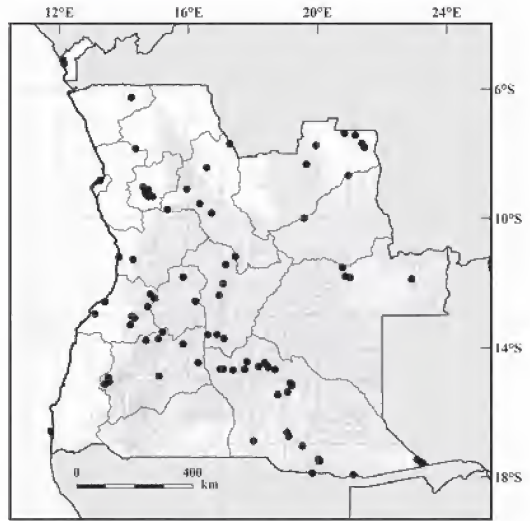
Hyperolius (Hyperolius) marmoratus: Frétey et al. (2011:32).

Hyperolius (Hyperolius) parallelus: Frétey et al. (2011:32).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola and the adjacent countries of Namibia, Democratic Republic of Congo, and Zambia.

Ocurrences in Angola (Map 33): The species is very widespread for almost the entire territory. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:618; Bocage 1895a:164; Laurent 1961:89). “Landana” [-5.21667, 12.15000] (Laurent 1943a:14). **Zaire:** “St. Salvador du Congo” [-6.26667, 14.23333] (Bocage 1887a:191, 1895a:164; Perret 1976a:29). **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1867a:845, 1895a:166, 1897b:203; Loveridge 1936a:106, 1953a:352; Laurent 1961:88, Perret 1976a:27); “Longa, Loanda” (Ahl 1931a:78, 1931b:352; Barbour and Loveridge 1946:127). **Bengo:** “Ambriz” [-7.844312, 13.106493] (Boulenger 1882:121; Loveridge 1953a:352). **Malanje:** “Tembo Aluma” [-7.70000, 17.28333] (Boulenger 1905:109); “Bange N’gola” [-8.43333, 16.56667] (Boulenger 1905:109); “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:55, 1866b:74, 1893:118, 1895a:164, 167, 1897a:203; Boulenger 1882:121); “Malanje” [-9.55000, 16.35000] (Peters 1882a:8, Laurent 1961:88); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:669); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:31). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:17, 1954a:80, 1964a:152); “Matala rive gauche de la Thshiumbe, 40 km à l’est de Dundo” [-7.43333, 21.16667] (Laurent 1950a:17); “Carumbo lagoon” [-7.74422, 19.95467] (Conradie et al. 2012a:2); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:17, 1954a:80); “Andrada (Luembe O)” [-7.68729, 21.37003] (Laurent 1954a:80); “Caluango, Riv. Camaloa, affl. Caluango” [-8.33333, 19.65000] (Laurent 1964a:152); “Sombo, riv. Melanda, affl. Chiumbe” [-8.68333, 20.95000] (Laurent 1954a:80, 1964a:152). **Lunda Sul:** “Alto Cuílo, mare Tchifuka” [-10.00000, 19.58333] (Laurent 1964a:152). **Moxico:** “rives de Lumeje, près du lac Calundo” [-11.51667, 20.76667] (Laurent 1964a:152); “rives du lac Calundo, 105 km à l’est de Luso” [-11.80000, 20.86667] (Laurent 1964a:152); “Réserve de chasse de Cameia, 120 km à l’est de Luso” [-11.83333, 21.00000] (Laurent 1964a:152); “Cazombo (High Zambèze)” [-11.88333, 22.91667] (Laurent 1964a:153; Schiøtz 1975:185). **Kwanza Norte:** “N’golla Bumba” [-9.03333, 14.60000] (Ferreira 1906:161); “Golungo Alto” [-9.13333, 14.76667] (Boulenger 1905:109; Ferreira 1906:161); “Cambondo” [-9.15963, 14.65827] (Ferreira 1906:160); “Canhoca” [-9.25000, 14.68333] (Boulenger 1905:109); “Cazengo” [-9.33333, 14.76667] (Ferreira 1904:112); “Quilombo” [-9.33333, 14.90000] (Ferreira 1906:160). **Kwanza Sul:** “Novo Redondo Sumbe” [-11.20000, 13.85000] (Bocage 1895a:164; Perret 1976a:29); “Gumba” [-11.26667, 14.28333] (Ferreira



MAP 33. Distribution of *Hyperolius angolensis* in Angola.

1904:112). **Huambo**: “Bimbi” [-11.81667, 15.83333] (Monard 1937a:35-36, 38; 1938:89, 90, 92). **Bié**: “Gauca” [-11.18333, 17.45000] (Schmidt 1936:131); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:131); “Goedecke Farm, Conjo, 25 km north Genera Machado (Camacopa)” [-12.01667, 17.06667] (Mertens 1937a:20); “Bihé” [-12.38333, 16.95000] (Bocage 1879c:89, 1895a:164); “Cubango basin (10)” [-13.71616, 17.09661] (Conradie et al. 2016:8-9, 14); “Cuando basin (12a)” [-13.59333, 16.87986] (Conradie et al. 2016:8-9, 14); “Cuando basin (16)” (Conradie et al. 2016:8-9, 14). **Benguela**: “Cahata” [-12.35000, 14.81667] (Bocage 1895a:164); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:164); “Benguella” [-12.58333, 13.41667] (Bocage 1867a:844, 1887a:191; Günther 1869:479; Boulenger 1882:121; Loveridge 1936a:106, 1953a:352; Laurent 1961:89); “Ebanga” [-12.73333, 14.73333] (Monard 1937a:35, 37; 1938:89, 92); “Dombe” [-12.95000, 13.10000] (Bocage 1895a:164; Laurent 1961:89; Gevetti and Andreone 1993:104); “Cubal” [-13.03333, 14.25000] (Mertens 1938:427); “Marco de Canavezes (Cubal da Ganda)” [-13.08333, 14.33333] (Laurent 1964a:151); “Hanha” [-13.30000, 14.20000] (Bocage 1867a:844, 1896a:113, 1897b:211; Boulenger 1882:121); “Tongrube neben dem Jamba-Fluß, Entre Rios” [-13.60000, 16.60000] (Hellmich 1957a:28). **Huila**: “12 km W of Bela Vista” [-12.56667, 16.21667] (Poynton and Haacke 1993:15); “Rio Cuce” [-13.51667, 15.20000] (Ferreira 1897b:241); “Caconda” [-13.73333, 15.06667] (Bocage 1893:118, 1895a:164, 167, 1897a:203; Perret 1976a:27; Häupl and Tiedemann 1978:29; Häupl et al. 1994:34; Gevetti and Andreone 1993:104); “Kalukembé” [-13.78333, 14.68333] (Monard 1937a:35, 38; 1938:92); “Sangevé” [-13.88333, 15.83333] (Monard 1937a:35; 1938:89, 91; Frost 1985:210); “Kuvangu” [-14.46667, 16.30000] (Monard 1937a:35-38; 1938:90, 93); “Kapelongo” [-14.88333, 15.08333] (Monard 1937a:36, 1938:90); “Humpata” [-14.93333, 13.51667] (Conradie et al. 2012a:2); “Huilla” [-15.05000, 13.55000] (Günther 1865a:480; Bocage 1873b:225, 1895a:164; Boulenger 1882:121; Laurent 1961:88; Perret 1976a:29); “Nuntechite lagoon” [-15.13333, 13.41667] (Poynton and Haacke 1993:15). **Quando Cubango**: “Marunga oder Kawende” [-17.45000, 20.03333] (Ahl 1931a:77, 1931b:351; Laurent 1961:88); “Kuandu” [-16.74487, 19.10136] (Monard 1937a:36; 1938:90); “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9, 14); “(7c)” [-14.43916, 17.81491] (Conradie et al. 2016:8-9, 14); “Quando basin (19)” [-14.70213, 17.37772] (Conradie et al. 2016:8-9, 14); “Quando basin (21)” [-14.66586, 17.07661] (Conradie et al. 2016:8-9, 14); “Quando basin (22a)” [-14.66622, 16.97842] (Conradie et al. 2016:8-9, 14); “Cuito basin (23)” [-14.58972, 18.17083] (Conradie et al. 2016:8-9, 14); “Cuito basin (24)” [-14.60622, 18.46722] (Conradie et al. 2016:8-9, 14); “Cuito basin (24a)” (Conradie et al. 2016:8-9, 14); “Cuito basin (26)” [-15.08686, 19.14872] (Conradie et al. 2016:8-9, 14); “Cuito basin (27)” [-15.17127, 19.19433] (Conradie et al. 2016:8-9, 14); “Cuito basin (28)” [-15.13486, 19.19636] (Conradie et al. 2016:8-9, 14); “Cubango basin (29)” [-17.87291, 19.83333] (Conradie et al. 2016:9-10, 14); “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:9-10, 14); “Cuito basin (30b)” [-17.51194, 20.04305] (Conradie et al. 2016:9-10, 14); “Cuito basin (30d)” [-17.51327, 20.06111] (Conradie et al. 2016:9-10, 14); “Cuito basin (32)” [-17.04880, 19.53333] (Conradie et al. 2016:9-10, 14); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9-10, 14); “Quando basin (41b)” [-17.46777, 23.07944] (Conradie et al. 2016:9-10, 14); “Quando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10, 14); “Quando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10, 14); “Cubango basin (45)” [-16.88350, 18.01180] (Conradie et al. 2016:9, 12, 14); “Cuito basin (51)” [-14.58970, 18.1711] (Conradie et al. 2016:9, 12, 14); “Cuito basin (53b)” [-14.56322, 18.44394] (Conradie et al. 2016:9, 12, 14); “Cuito basin (54)” [-14.46810, 18.35488] (Conradie et al. 2016:9, 12, 14); “Cuito basin (55)” [-14.68478, 18.67369] (Conradie et al. 2016:9, 12, 14); “Cuito basin (57)” [-15.45969, 18.76833] (Conradie et al. 2016:9, 12, 14); “Cuito basin (58)” [-15.38206, 19.06375] (Conradie et al. 2016:9, 12, 14); “Cuito basin (62)” [-17.50875,

20.06608] (Conradie et al. 2016:9, 12, 14); “Cuito basin (63)” [-17.93611, 21.10269] (Conradie et al. 2016:9, 12, 14). **Undetermined Locality:** “Without precise location” (Bocage 1887a:191, Laurent 1961:88); “north of Quanza” (Bocage 1895a:164); “Between Benguela and Bihé” (Boulenger 1905:109); “Locomi” (Boulenger 1905:109); “plateaus regions” (Cei 1977:17); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17)

Taxonomic and distributional notes: This species was first described as *Hyperolius angolensis* Steindachner, 1867 based on a single specimen from “Angola,” now corrected to “Duque de Brangança” [= Calandula] (Ceríaco et al. 2014b); note, however, that Häupl and Tiedemann (1978) cited two syntypes from “Angola” deposited in the Naturhistorisches Museum in Wien, Austria. This species has been reported from Angola by many previous authors under a variety of names. This taxon is considered to be a synonym of *Hyperolius parallelus* Günther, 1858 by some authors such as Wieczorek et al. (2000), Frétey et al. (2011), Ceríaco et al. (2014b), and Frost (2016). Other authors, including Schiøtz (1999), considered it part of the *Hyperolius parallelus-marginatus* subgroup — corresponding to one of three taxa, *parallelus*, *insignis* and *angolensis* — or instead a subspecies of *Hyperolius marmoratus* (Rapp, 1842) as was suggested by Loveridge (1953a) and Poynton and Broadley (1987). Channing (2001) and Conradie et al. (2012a) considered *Hyperolius angolensis* to be a valid species. Both *H. parallelus* and *H. marmoratus* are taxonomically problematic. Poynton and Broadley (1987) regarded all the forms in southern Africa as subspecies of *H. marmoratus*, while Channing (1999) regarded *angolensis* and possibly other forms from Angola as specifically distinct from the eastern *marmoratus*-forms (Schiøtz 1999). *Hyperolius parallelus* is represented in southern and southwestern Africa, including Angola (Schiøtz 1999) whereas, *H. marmoratus*, is widespread across southern and eastern Africa and appears to be absent from Angola (Channing 2001; Frost 2016). The nomina *parallelus* and *marmoratus* were previously reported from the country under various names associated with many different species and subspecies names (Ferreira 1906; Loveridge 1953a; Monard 1937a, 1938; Mertens 1938; Laurent 1964a; Perret 1976a; Frétey et al. 2011). This is explained partly by the considerable intraspecific and interspecific variation in coloration and pattern across populations (Ceríaco et al. 2014b). There are several studies in progress on the genus *Hyperolius* that will help to clarify species boundaries among these challenging taxa. Given the current state of knowledge, we refer all of these records to *Hyperolius angolensis*, though we recognize that this may contain multiple biological species.

***Hyperolius benguellensis* (Bocage, 1893)**

BENGUELA LONG REED FROG

Rappia benguellensis Bocage 1893:119. Syntypes: MBL 27.220-223 (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Cahata dans l’intérieur de Benguella” (Bocage 1893:119), [= Caota] Benguela Province, Angola.

Rappia benguellensis: Bocage (1895a:169, 1897a:204, 1897b:211), Ferreira (1906:161).

Hyperolius nasutus: Monard (1937a:39, 1938:94).

Hyperolius benguellensis: Noble (1924:252), Monard (1937a:34; 1938:87), Frade (1963:254), Perret (1976a:27), Frost (1985:207, 2016), Poynton and Broadley (1987:208), Amiet (2005:292), Schiøtz and Van Daele (2003:128), Amiet (2005:275) Schiøtz (2006:62), Conradie et al. (2012a:2), Channing et al. (2013:317).

Hyperolius oxyrhynchus: Laurent (1950a:17).

Hyperolius nasutus: Schiøtz (1999:97), Channing et al. (2002:96).

Hyperolius (*Hyperolius*) *benguellensis*: Frétey et al. (2011:29).

Global conservation status (IUCN): Least Concern.

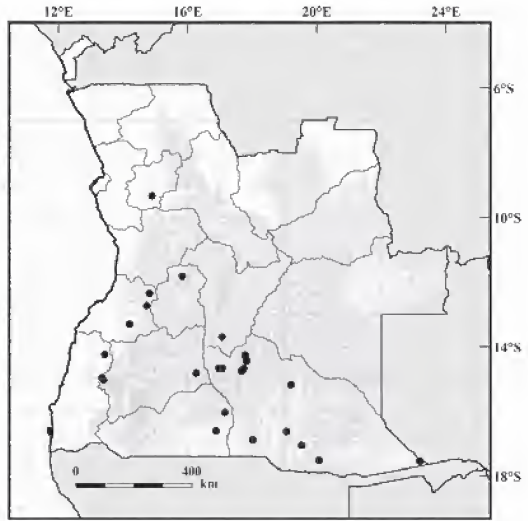
Global distribution: The species is known from Democratic Republic of Congo (former

Katanga Province), southern Angola and adjacent northern Namibia and Botswana.

Ocurrences in Angola (Map 34): The species is known from western Angola from the type locality “Cahata, Benguella,” although there are some records further north. **Kwanza Norte:** “Quilombo” [-9.33333, 14.90000] (Ferreira 1906:161). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1938:87). **Bié:** “Cubango basin (11)” [-13.69413, 17.06177] (Conradie et al. 2016:8-9, 15); “Cubango basin (12a)” [-16.59333, 16.87986] (Conradie et al. 2016:8-9, 15); **Benguela:** “Cahata (Caota)” [-12.35000, 14.81667] (Bocage 1893:119 1895a:169, 1897a:204; Perret 1976a:27; Frost 1985:207, 2016; Poynton and Broadley 1987:208; Channing et al. 2002:96; Amiet 2005:275; Channing et al. 2013:318); “Eban-ga” [-12.73333, 14.73333] (Monard 1938:87);

“Hanha” [-13.30000, 14.20000] (Bocage 1897b:211). **Huíla:** “Indungu” [-14.81667, 16.26667] (Monard 1938:87); “Zootecnica Plateau, Humpata” [-14.96581, 13.34458] (Channing et al. 2013:317); “Humpata” [-14.23814, 13.43331] (Channing et al. 2013b:317); “Humpata” [-15.03333, 13.40000] (Conradie et al. 2012a:2). **Cunene:** “Chimporo” [-16.03333, 17.15000] (Monard 1937a:39, 1938:94). **Cuando Cubango:** “Cubango basin (5)” [-14.74628, 17.66844] (Conradie et al. 2016:8-9, 15); “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9, 15); “Cubango basin (7b)” [-14.43377, 17.82957] (Conradie et al. 2016:8-9, 15); “Cubango basin (7c)” [-14.43916, 17.81491] (Conradie et al. 2016:8-9, 15); “Cubango basin (8)” [-14.25705, 17.77852] (Conradie et al. 2016:8-9, 15); “Cubango basin (21)” [-14.66586, 17.07661] (Conradie et al. 2016:8-9, 15); “Cubango basin (22b)” [-14.66278, 16.96081] (Conradie et al. 2016:8-9, 15); “Cuito basin (27)” [-15.17127, 19.19433] (Conradie et al. 2016:8-9, 15); “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:9-10, 15); “Cuito basin (30d)” [-17.51327, 20.06111] (Conradie et al. 2016:9-10, 15); “Cuito basin (32)” [-17.04880, 19.53333] (Conradie et al. 2016:9-10, 15); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9-10, 15); “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10, 15); “Cubango basin (45)” [-16.88350, 18.01180] (Conradie et al. 2016:9, 12, 15). **Undetermined Locality:** “Western subregion and Angolan highlands (Angolan coastal or watersheds)” (Frade 1963:254).

Taxonomic and distributional notes: In the description, Bocage notes that the type specimens are similar to *Rappia nasuta* (Günther, 1865). In their detailed discussion of the *benguensis-nasutus* complex, Poynton and Broadley (1987) had little doubt that the characters used at that time were inadequate to separate all available specimens into *nasutus* and *benguellensis*. Schiøtz (1999) concluded that it is difficult to separate *H. nasutus* and *H. benguellensis* based on morphology and color patterns. Channing et al. (2002) proposed formal changes in nomenclature and gave detailed lists of synonyms, but Schiøtz (2006) questioned several of these changes. Schiøtz and Van Daele (2003) provided a discussion about the differences in the advertisement calls of *nasutus* and *benguellensis* as well as differences in external morphology. *Hyperolius benguellensis* (Bocage, 1893) was questionably removed from the synonymy of *H. nasutus* Günther, 1865 by Amiet (2005). Channing et al. (2013) used molecular data to argue that *H. benguellensis* is a valid



MAP 34. Distribution of *Hyperolius benguellensis* in Angola.

species. The species has only been confirmed from southern Angola, northern Namibia, and northern Botswana where it was found in open grassy habitats, along streams or man-made structures with emergent vegetation (Channing et al. 2013). We follow Poynton and Broadley (1987), Schiøtz and Daele (2003), and Channing et al. (2013) in regarding *H. benguellensis* as distinct from the sympatric *H. nasutus*. *Hyperolius oxyrhynchus* is regarded as a synonym of *H. benguellensis* (Channing et al. 2013b), though a record from “Muíta” (Laurent 1950) is probably a misidentification as it is far to the north of the rest of the distribution of *H. benguellensis*. Laurent’s (1950a) record should probably be referred to another species of the *nasutus* complex, such as *H. adspersus* or *H. nasutus*.

***Hyperolius bicolor* Ahl, 1931**

TWO-COLORED REED FROG (Endemic)

Hyperolius bicolor Ahl 1931a:129. Syntypes: ZMB, lost (collector K. May). Type locality: “Farenda Bango, Loanda” (Ahl 1931a:129), [= Fazenda Bango, Luanda], Angola.

Hyperolius bicolor: Frost (1985:208, 2016).

Global conservation status (IUCN):

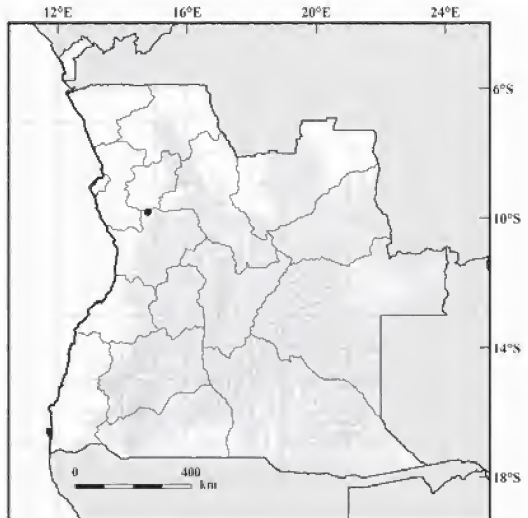
Data Deficient.

Global distribution: The species is known only from Angola.

Ocurrences in Angola (Map 35): The species is known only from the type locality “Fazenda Bango, Loanda”. **Luanda:** “Farenda Bango” [-9.81767, 14.78916] (Ahl 1931a:129; Frost 1985:208, 2016).

Taxonomic and distributional notes:

According to Laurent (*in* Frost 1985:208, 2016) the species is probably a synonym of *Hyperolius marmoratus insignis*, a member of *parallelus-marginatus* subgroup (Schiøtz 1999) [see *Hyperolius angolensis* account]. The validity of this taxon is questionable and difficult to address due to loss of the type specimen.



MAP 35. Distribution of *Hyperolius bicolor* in Angola.

***Hyperolius bocagei* Steindachner, 1867**

BOCAGE’S REED FROG

Hyperolius bocagei Steindachner 1867:51, pl. 5, fig. 11. Holotype: NHMW 14846 *fide* Häupl and Tiedemann (1978:22) (Collector F.P. Bayão). Type locality: “Angola” (Steindachner 1897:51).

Rappia bocagei var. *maculata* Ferreira 1906:160. Type: Not stated (collector F. Newton), see Ceriaco et al. (2014a:25-26) discussion. Type locality: “Golungo Alto”, Angola.

Rappia seabrai Ferreira 1906:163. Holotype: (collector F. Newton), not located, probably lost. Paratype: MNHFCP 018587 (collector F. A. P. Bayão). Type locality: “Quilombo, Rio Luinha” [= Gonguembo] Kwanza Norte, Angola.

Hyperolius bocagei: Bocage (1873b:225), Noble (1924:252), Parker (1936:143), Laurent (1950a:16, 1954a:79, 1964a:150), Ceil (1977:17); Poynton and Broadley (1987:212), Häupl and Tiedemann (1978:22), Frost (1985:208, 2016), Häupl et al. (1994:26), Schiøtz (1999:188), Channing (2001:151), Schiøtz and Van Daele (2003:145), Ceriaco et al. (2014a:24).

Rappia bocagii: Boulenger (1882:126, 1905:109), Bocage (1895a:165, 1897a:203).

Rappia cinctiventris: Bocage (1895a:168), Boulenger (1905:110).

Rappia bocagei: Ferreira (1904:112, 1906:160).

Hyperolius seabrai: Noble (1924:253), Schmidt (1936:132), Monard (1937a:39, 1938:95), Cei (1977:17), Frost (1895:118).

Hyperolius cinctiventris: Noble (1924:252), Monard (1938:93), Inger (1959:541), Cei (1977:17).

Hyperolius (Hyperolius) bocagei: Frétey et al. (2011:29).

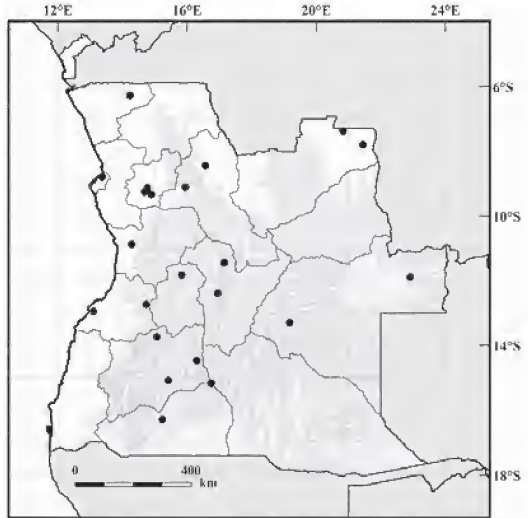
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known only from the Democratic Republic of the Congo, to Tanzania, Angola and Zambia.

Ocurrences in Angola (Map 36): The species has been reported from scattered localities mainly in the westerns regions of the country. **Zaire:** “St. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:165, 1897a:203). **Luanda:** “Cacuaco?” [-8.78333, 13.36667] (Ferreira 1904:112). **Kwanza Norte:** “Canhoca” [-9.25000, 14.68333] (Boulenger 1905:109); “Golungo Alto” [-9.13333, 14.76667] (Ferreira 1906:160); “Quilombo, Rio Luinha” [-9.33333, 14.90000] (Ferreira 1906:163; Ceriaco et al. 2014a:24). **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:143). **Malanje:** “Bange N’gola” [-8.43333, 16.56667] (Boulenger 1905:110); “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1873b:225, 1895a:165, 1897a:203; Ferreira 1906:163; Ceriaco et al. 2014a:24).

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1950a:16, 1954a:79, 1964a:150); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:16). **Moxico:** “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:150). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937a:40, 1938:93, 96). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1936:132); “Bihé” [-12.38333, 16.95000] (Bocage 1895a:168). **Benguela:** “Ebanga” [-12.73333, 14.73333] (Monard 1938:93); “Dombe” [-12.95000, 13.10000] (Bocage 1895a:168). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:165); “Kuvangu” [-14.46667, 16.30000] (Monard 1937a:40, 1938:93, 95); “Osi” [-15.08333, 15.41667] (Monard 1938:93). **Cunene:** “ruisseau Mbalé” [-15.16667, 16.75000] (Monard 1938:93); “Kamba” [-16.28333, 15.23333] (Monard 1938:93). **Cuando Cubango:** “Kuandu” [-16.74487, 19.10136] (Monard 1937a:40, 1938:93, 95). **Undetermined localities:** without precise location (Boulenger 1882:165); “Nana Meya” (Boulenger 1905:110).

Taxonomic and distributional notes: *Hyperolius bocagei* Steindacher, 1867 was described based on a specimen from “Angola”. However, the type locality of *H. bocagei* should be considered “Duque de Bragança [= Calandula], Malanje,” as this is the locality from which the specimen collected by Pinheiro Bayão was sent by Bocage to Steidachner (Ceriaco et al. 2014a). Ferreira (1906) described *Rappia seabrai* based on a single individual deposited in Museu do Porto, collected by Francisco Newton. The holotype is believed to be lost (Ceriaco et al. 2014a) and several authors consider it to be a synonym of *H. bocagei* (Laurent, pers. comm. in Frost, 1985; Frétey et al., 2011; Ceriaco et al. 2014a; Frost 2016). In the original description, Ferreira (1906) also noted that one specimen referable to *H. seabrai* from “Duque de Bragança” [= Calandula] collected by Bayão was found in Museu Bocage, Lisboa, Portugal, and this was considered a paratype by Ceriaco et al. (2014a). The type locality of “Quilombo,” currently Gonguembo in Kwanza Norte



MAP 36. Distribution of *Hyperolius bocagei* in Angola.

Province, is approximately 140 km west of Caladula Falls in Malanje Province, formerly “Duque de Brangança,” the type locality of *H. bocagei* and the locality from which the paratype of *R. seabrai* was collected (Ceriaco et al. 2014a). Schiøtz (1999) and Schiøtz and Van Daele (2003) suggested that *H. bocagei* might be a junior synonym of a species in the *Hyperolius viridiflavus* complex. Poynton (1986) considered *Hyperolius cinctiventris* Cope, 1862 to be a synonym of *Hyperolius argus* Peters, 1854, and as this species is restricted to East Africa it is unlikely to correspond to Angolan specimens. The specimens identified by Monard (1938) as *cinctiventris* deposited in the Musée d’Histoire Naturelle, La-Chaux-de Fond, Switzerland were recently studied and identified as *Hyperolius bocagei* (Ceriaco et al. in prep.).

***Hyperolius chelaensis* Conradie, Branch, Measy and Tolley, 2012**

**CHELA MOUNTAIN
REED FROG (Endemic)**

Hyperolius chelaensis Conradie et al. 2012a:5, figs 5-6. Holotype: PEM A9223 (collector W. Conradie). Type locality: “a small patch (< 2.5ha.) of Afromontane forest in a small gorge draining from Serra da Chela above the Estacao Zootechnica, near Humpata, Lubango” (Conradie et al. 2012a:5), Angola.

Hyperolius chelaensis: Conradie et al. (2013:203), Frost (2016).

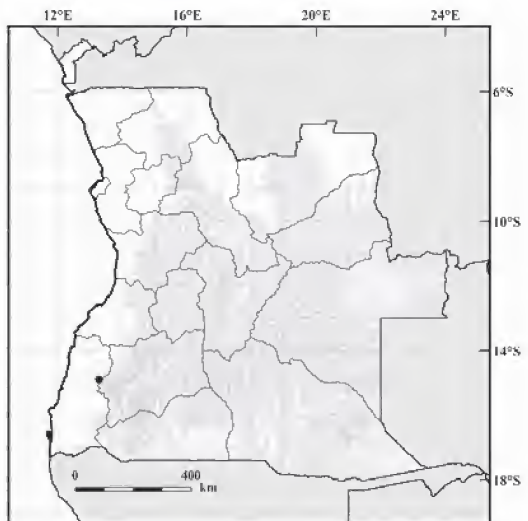
Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 37): The species is known only from the type locality “Serra de Chela,” Lubango. **Huíla:** “Serra de Chela gorge, above the Estação Zootechnica near Humapata, Lubango” [-14.88944, 13.27417] (Conradie et al. 2012a:5; Conradie et al. 2013:203).

Taxonomic and distributional notes:

This species was recently described by Conradie et al. (2012a). According to the original publication, *H. chelaensis* is the sister species of *H. cinereus* Monard, 1937. The type locality is along a small stream that drains from the Serra de Chela escarpment into the ephemeral water courses (e.g., Giraul River) draining west to the Atlantic Ocean (Conradie et al. 2013). It is expected to be more widespread in the Serra de Chela and Leba mountain ranges. Further surveys are needed to establish a full distribution of the species and its conservation status.



MAP 37. Distribution of *Hyperolius chelaensis* in Angola.

***Hyperolius cinereus* Monard, 1937**

ASHY REED FROG (Endemic)

Hyperolius cinereus Monard 1937a:32. Syntypes: MHNC 90.0856–7 (collector A. Monard). Type locality: “Kalukembé” and “Bimbi” (Monard 1937a:32), [= Caluquembe and Bimbe], Angola.

Hyperolius cinereus: Monard (1938:85), Cei (1977:17), Frost (1985:209, 2016), Schiøtz (1999:192), Channing (2001:152), Conradie et al. (2012a:17), Conradie et al. (2013:222).

Hyperolius (Hyperolius) cinereus: Frétey et al. (2011:30).

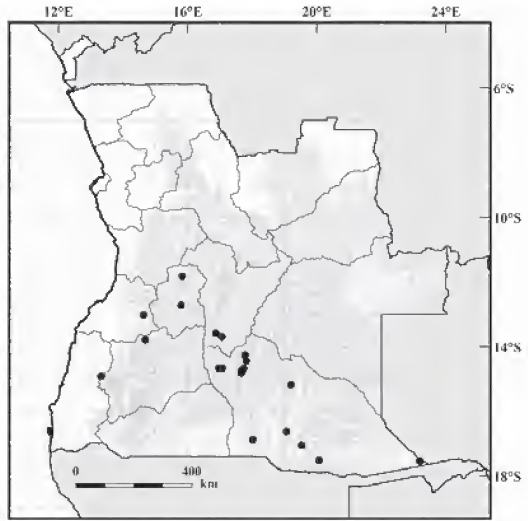
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 38): The species is known from southwestern and central Angola. **Bié:** “western dambo of Cacuchi River, Bie Province” [-13.58333, 16.86667] (Conradie et al. 2013:222); “Cubango basin (11)” [-13.69413, 17.06177] (Conradie et al. 2016:8-9, 16). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937a:32, 1938:85, Channing 2001:153; Conradie et al. 2013:222); “small stream at Huambo Agriculture Institute, Huambo Province” [-12.71667, 15.80000] (Conradie et al. 2013:222); “1st stream crossing east of Caccuchi River, Bie Province” [-13.68333, 17.05000] (Conradie et al. 2013:222). **Benguela:** “Zamba-Seidlung bei Entre Rois, Benguella Province” [-13.01667, 14.63333] (Conradie et al. 2013:222). **Huíla:** “Kalukembé” [-13.78333, 14.68333] (Monard 1937a:32, 1938:85; Frost 1985:209, 2016; Channing 2001:153; Conradie et al. 2013:201, 222); “stream under road before Estacao Zootechnica near Humpata, Lubango” [-14.90400, 13.32556] (Conradie et al. 2012a:17; Conradie et al. 2013:222); “waterfall below dams, on plateau above Estacao Zootechnica near Humpata, Lubango” [-14.91425, 13.31386] (Conradie et al. 2012a:17, Conradie et al. 2013:222). **Cuando Cubango:** “5 km south of Soba Matios Military base, Cuando” [-14.25706, 17.77861] (Conradie et al. 2013:222); “small stream after Muvange river, near Menongue” [-14.73333, 17.66667] (Conradie et al. 2013:222); “Muvange river crossing, near Menongue” [-14.81667, 17.66667] (Conradie et al. 2013:222); “Cubango basin (5)” [-14.74628, 17.66844] (Conradie et al. 2016:8-9, 16); “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9, 16); “Cubango basin (7c)” [-14.43916, 17.81491] (Conradie et al. 2016:8-9, 16); “Cubango basin (8)” [-14.25705, 17.77852] (Conradie et al. 2016:8-9, 16); “Cubango basin (21)” [-14.66586, 17.07661] (Conradie et al. 2016:8-9, 16); “Cubango basin (22b)” [-14.66278, 16.96081] (Conradie et al. 2016:8-9, 16); “Cuito basin (27)” [-15.17127, 19.19433] (Conradie et al. 2016:8-9, 16); “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:9-10, 16); “Cuito basin (30d)” [-17.51327, 20.06111] (Conradie et al. 2016:9-10, 16); “Cuito basin (32)” [-17.04880, 19.53333] (Conradie et al. 2016:9-10, 16); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9-10, 16); “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10, 16); “Cubango basin (45)” [-16.88350, 18.01180] (Conradie et al. 2016:9, 12, 16).

Undetermined Locality: “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17); “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes: *Hyperolius cinereus* Monard, 1937 was described based on two syntype specimens from “Kalukembé” in Huíla Province and “Bimbi” in Huambo Province (Monard 1937a). Laurent (1964a) later assigned a small collection of specimens from “Dundo” in Lunda Norte Province to *H. cinereus*, although his characterization of the coloration of this species differs from that of Monard. Both Monard (1937a) and Laurent (1964a) examined only preserved material and could only speculate on the coloration in life (Conradie et al. 2013). Conradie et al. (2013) considered that populations from southern and central Angola, including the localities for Monard’s two syntypes, correspond to *H. cinereus*. However, the northern populations



MAP 38. Distribution of *Hyperolius cinereus* in Angola.

identified by Laurent (1964a) correspond to a closely related species that they described as *Hyperolius raymondi* Conradie, Branch and Tolley, 2013 (see *H. raymondi*). Both species occur in flooded grasslands called “dambos” where water levels reach 30 (northern population) to 50 (southern population) cm deep (Conradie et al. 2013). Monard (1937a) stated that the syntype from “Bimbi” was a juvenile and differed in several characters. Due to that, Conradie et al. (2013a) argued that this specimen should not be considered part of the type series, instead assigning it only provisionally to *H. cinereus*, which was followed by Frost (2016). We recently studied the type material in the Musée d’Histoire Naturelle, La-Chaux-de-Fond, Switzerland and believe that the “Bimbi” specimen is identifiable as *Hyperolius cinereus*, and as it was used by Monard in his description it should be recognized as a part of the type series (Ceriaco et al. in prep.).

Hyperolius cinnamomeoventris Bocage, 1866

CINNAMON-BELLIED REED FROG

Hyperolius cinnamomeo-ventris Bocage 1866a:55, 1866b:75. Holotype: MBL (collector F.A.P. Bayão), not located by Perret (1976a:24), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” (Bocage 1866a:55), [= Calandula] Malanje Province, Angola.

Rappia tristis Bocage 1866a:56, 1866b:76. Holotype: MBL (collector F.A.P. Bayão), not located by Perret (1976a:25), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” (Bocage 1866a:56), [= Calandula] Malanje Province, Angola.

Rappia cinnamomeiventris: Bocage (1895a:172, 1897a:204), Ferreira (1906:163).

Rappia cinnamomei-ventris: Bocage (1897b:211), Noble (1924:252, 253), Mertens (1938:429).

Hyperolius tristis: Bocage (1895a:171, 1897a:204), Boulenger (1882:121), Perret (1976a:25).

Rappia bivittata: Ferreira (1906:161).

Hyperolius cinnamomeoventris: Parker (1936:144), Laurent (1950a:16, 1954a:78, 1964a:149), Cei (1977:17), Perret (1976a:25), Frost (1985:209, 2016), Schiøtz (1999:129), Channing (2001:153), Conradie et al. (2013:206), Ceriaco et al. (2014a:19), Ceriaco et al. (2016b:37).

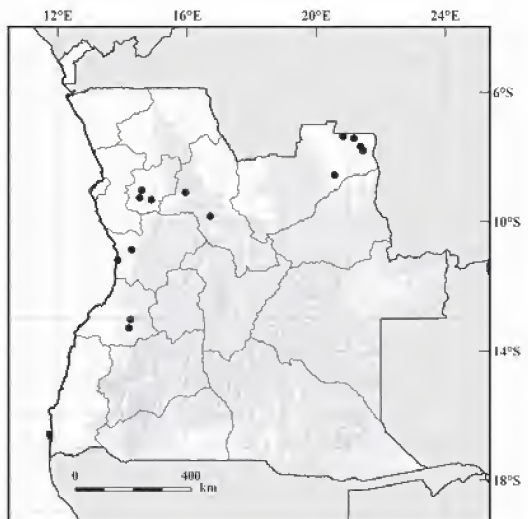
Hyperolius cinnamomeoventris cinnamomeoventris: Laurent (1961:79), Schiøtz (1975:123).

Hyperolius (Hyperolius) cinnamomeoventris: Frétey et al. (2011:30).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from central and southern Cameroon south to Angola, extending across the Democratic Republic of Congo to northwestern Zambia, and east to Uganda and western Kenya.

Occurrences in Angola (Map 39): The species is found in western areas along the coast as well as northeastern regions of the country. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:78); “environs de Dundo, forêt des sources de la Dundundo” [-7.36667, 20.83333] (Laurent 1964a:149); “Matala, rive gauche de la Tshihumbwe, 40 km à l’est de Dundo” [-7.43333, 21.16667] (Laurent 1950a:16); “Andrada (Luembe O)” [-7.68729, 21.37003] (Laurent 1954a:78); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:16); “riv. Kakuje, affl. gauche Luembe près du village du “soba”, Santana” [-8.56667, 20.56667] (Laurent 1954a:78). **Malanje:** “Duque de Bragança” [-9.10000,



MAP 39. Distribution of *Hyperolius cinnamomeoventris* in Angola.

15.95000] (Bocage 1866a:55, 56, 1866b:76, 1895a:171, 172, 1897a:204; Laurent 1961:79; Schiøtz 1975:123, Perret 1976a:25; Frost 1985:209, 2016); “Kalandula” [-9.10000, 15.95000] (Conradie et al. 2013:206), “Cangandala National Park” [-9.84606, 16.72233] (Ceríaco et al. 2016b:37). **Kwanza Norte:** “N’golla Bumba” [-9.03333, 14.60000] (Ferreira 1906:161; Ceríaco et al. 2014a:19); “Rio Luinha” [-9.26667, 14.53333] (Ferreira 1906:163); “Quilombo” [-9.33333, 14.90000] (Ferreira 1906:163). **Kwanza Sul:** “Novo Redondo” [-11.20000, 13.85000] (Ferreira 1906:163); “Congulu” [-10.86667, 14.28333] (Parker 1936:144). **Benguela:** “Hanha” [-13.30000, 14.20000] (Bocage 1897a:204, 1897b:211; Perret 1976a:25); “Cubal” [-13.03333, 14.25000] (Mertens 1938:429). **Undetermined Locality:** “Mupèpe” (Ferreira 1906:163); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17); “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes: Bocage (1866b) described two new species, *Hyperolius cinnamomeo-ventris* Bocage, 1866 and *Rappia tristis* (Bocage, 1866) from “Duque de Bragança [= Calandula].” The nomen *tristis* was synonymized with *H. cinnamomeoventris* by Laurent (1943b, 1947) and has subsequently been followed by other authors including Perret (1976a). Before the Lisbon fire Perret (1976a) visited the Museu Bocage but did not find the holotype of either of these species. One syntype of *Rappia bivittata* designated by Ferreira (1906) from “N’Golla Bumba,” Kwanza Sul province seems to represent *Hyperolius cinnamomeoventris* Bocage, 1866 (Ceríaco et al. 2014a). Currently this species is accepted and recognized as *Hyperolius cinnamomeoventris* (Schiøtz 1999; Channing 2001; Frétey et al. 2011; Conradie et al. 2013; Frost 2016). This widespread species represents a complex of species found in Central Africa and several offshore islands and is awaiting taxonomic revision.

Hyperolius concolor (Hallowell, 1844)

VARIABLE REED FROG

Ixalus concolor Hallowell 1844:60. Holotype: ANSP 3216 (Malnate 1971:350) (collector unknown). Type locality: “Liberia, W. Africa” (Hallowell 1844:60), Liberia.

Hyperolius modestus: Bocage (1866a:55, 1866b:74).

Rappia concolor: Bocage (1895a:173), (1897b:211).

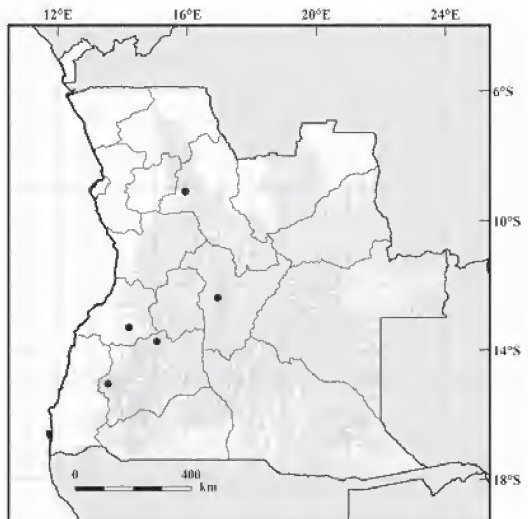
Hyperolius concolor: Noble (1924:252), Schiøtz (1999:104), Amiet (2012:264), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from eastern Sierra Leone to western Cameroon, and along the Atlantic coast south to Angola.

Ocurrences in Angola (Map 40): The species is recorded mostly from western Angola. **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:55, 1866b:74). **Bié:** “Bihé” [-12.38333, 16.95000] (Bocage 1895a:173). **Benguela:** “Hanha” [-13.30000, 14.20000] (Bocage 1897b:211). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:173); “Huila” [-15.05000, 13.55000] (Bocage 1895a:173). **Undetermined Locality:** “Rio Quando” (Bocage 1895a:173).

Taxonomic and distributional notes: The Angolan records of *Hyperolius concolor* (Hallowell, 1844) probably represent a



MAP 40. Distribution of *Hyperolius concolor* in Angola.

misidentification, although Frétey et al. (2011) considered the species present in Angola. Unfortunately, the specimens used by Bocage (1866a, 1866b, 1895a, 1897b) were destroyed in the 1978 fire at the Museu Bocage, Lisboa. Noble (1924) cited one specimen of *H. concolor* from Angola at the American Museum of Natural History, although he did not provide more precise locality information.

***Hyperolius dartevellei* Laurent, 1943**

DARTEVELLE'S REED FROG

Hyperolius dartevellei Laurent 1943:71, fig. 3. Holotype: MRAC 38385 (collector E. Dartevelle). Type locality: "Zambi, Bas-Congo", Democratic Republic of Congo.

Hyperolius nasutus adspersus: Laurent (1961:92).

Hyperolius dartevellei: Channing et al. (2002:96), Amiet (2015:275), Channing et al. (2013:319), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southern Cameroon to the lower Congo Basin, northern Angola and the highlands of northwestern Zambia.

Occurrences in Angola: The species is known from the most northern parts of Angola as plotted by Channing (2001). Those occurrences are not mapped here.

Taxonomic and distributional notes: *Hyperolius dartevellei* Laurent, 1943 was recently removed by Channing et al. (2013) from the synonymy of *Hyperolius adspersus* Peters, 1877, in which it had been placed by Laurent (1961). Channing et al. (2002) and Amiet (2005) considered it a member of *nasutus* complex. The species is presently only confirmed from northern Angola, including the Cabinda enclave (Channing et al. 2013).

***Hyperolius fuscigula* Bocage, 1866**

BROWN-THROATED REED FROG (Endemic)

Hyperolius fuscigula Bocage 1866a:56, 1866b:76. Syntypes: MBL 19-189 [2 specimens] (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: "Duque de Bragança" (Bocage 1866a:56), [= Calandula], Angola.

Rappia fuscigula: Bocage (1895a:170, 1897a:204).

Hyperolius fuscigula: Noble (1924:253), Perret (1976a:26), Frost (2016).

Hyperolius cinnamomeoventris: Laurent (1943:67).

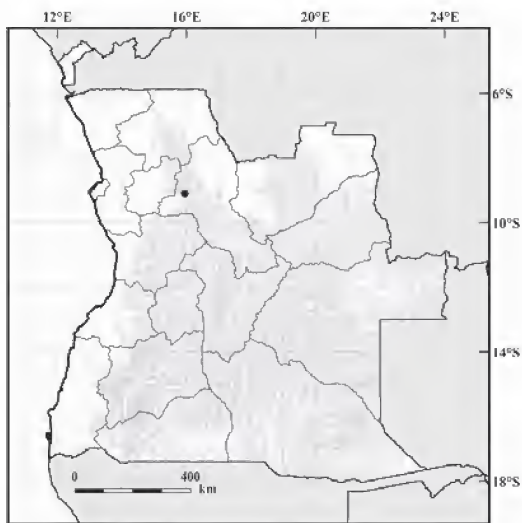
Hyperolius (Hyperolius) fuscigula: Frétey et al. (2011:30).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 41): The species is known only from the type locality in Malanje. **Malanje:** "Duque de Bragança" [-9.10000, 15.95000] (Bocage 1866a:56, 1866b:76, 1895a:170, 1897a:204; Perret 1976a:26).

Taxonomic and distributional notes: Laurent (1943b) tentatively considered *Hyperolius fuscigula* Bocage, 1866 to be a synonym of *Hyperolius cinnamomeoventris* Bocage, 1866. Perret (1976a) noted the poor condition



MAP 41. Distribution of *Hyperolius fuscigula* in Angola.

of the type specimens that were later destroyed in the 1978 fire. Because of the lack of records and loss of the type material, the validity of this taxon is uncertain.

***Hyperolius glandicolor* Peters, 1878**

PETERS' REED FROG

Hyperolius glandicolor Peters 1878:208, pl. 2, fig. 9. Syntypes: ZMB 9299 [2 specimens] (collector J.M. Hildebrandt). Type locality: "Taita", Kenya.

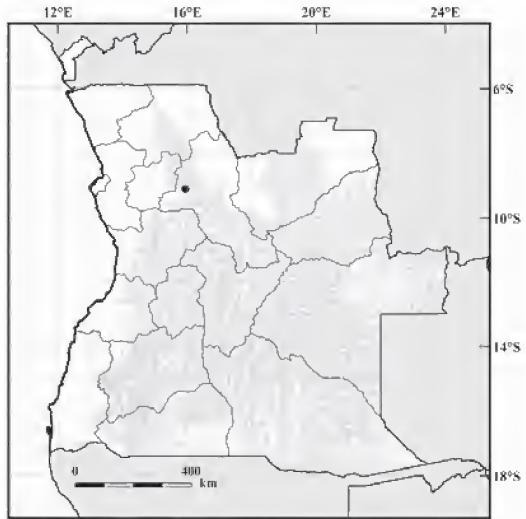
Hyperolius glandicolor: Schiøtz (1999:212), Wieczorek et al. (2000:1333), Channing and Howell (2006:162), Conradie et al. (2012a:6).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Kenya, southern Somalia, and Tanzania, Angola and adjacent Democratic Republic of Congo and northern Mozambique.

Occurrences in Angola (Map 42): The only Angolan record is from the northwest of the country. **Malanje:** "Duque de Bragança" [-9.10000, 15.95000] (Bocage 1866a:56).

Taxonomic and distributional notes: This species was removed from the synonymy of *Hyperolius marmoratus* Rapp, 1842 by Wieczorek et al. (2000), and Schiøtz (1999) has argued it is a member of the *viridiflavus* sub-group in the *viridiflavus* complex. The recognized distribution of this species is limited to the eastern coast of equatorial Africa and the associated interior, where it is often associated with higher elevations (Wieczorek et al. 2000). The Angolan record from "Duque de Bragança" [= Calandula] likely should be referred to another species of *Hyperolius*.



MAP 42. Distribution of *Hyperolius glandicolor* in Angola.

***Hyperolius gularis* Ahl, 1931**

LUANDA REED FROG (Endemic)

Hyperolius gularis Ahl 1931b:408, fig. 281. Holotype: ZMB uncatalogued (collector K. May), probably lost.

Type locality: "Loanda" [= Luanda] Luanda Province, Angola.

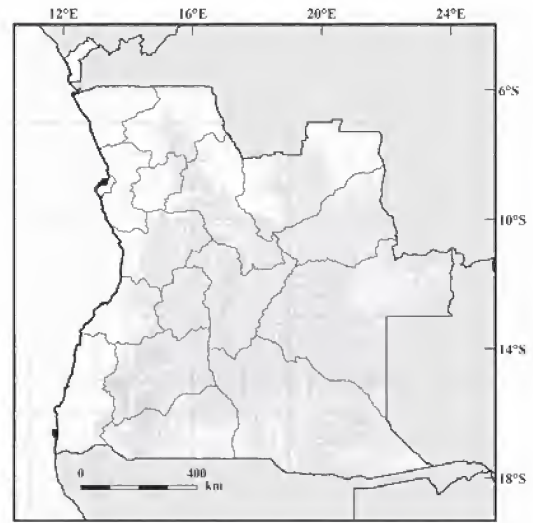
Hyperolius gularis: Frost (1985:211, 2014).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 43): The species is known only from the type locality "Loanda". **Luanda:** "Loanda" [-8.83333, 13.26667] (Ahl 1931a:125; Frost 1985:211, 2016).

Taxonomic and distributional notes: The taxonomic validity of this species is doubtful and it has not been discussed in recent synopses of *Hyperolius* by Schiøtz (1999), Channing (2001), or Frétey et al. (2011). However, Laurent (*in* Frost 1985; Frost 2016) suggested that this species is probably a synonym of *Hyperolius marmoratus* Rapp, 1842, which we recognize above as *Hyperolius angolensis* Steindachner, 1867 (see *H. angolensis* account).

MAP 43. Distribution of *Hyperolius gularis* in Angola.***Hyperolius kivuensis* Ahl, 1931****KIVU REED FROG**

Hyperolius kivuensis Ahl 1931b:280., fig. 151. Holotype: ZMB 36098 (collector Kandt). Type locality: “Kivu-See” (Ahl 1931a:280), [= Lake Kivu], Democratic Republic of Congo.

Hyperolius multifasciatus: Monard (1937a:33, 1938:87).

Hyperolius kivuensis kivuensis: Laurent (1950:16, 1954a:78, 1964a:149), Poynton and Broadley (1976:196).

Hyperolius quinquevittatus: Laurent (1950a:16, 1954a:79).

Hyperolius kivuensis: Cei (1977:17), Schiøtz (1999:163), Channing (2001:157), Frost (2016).

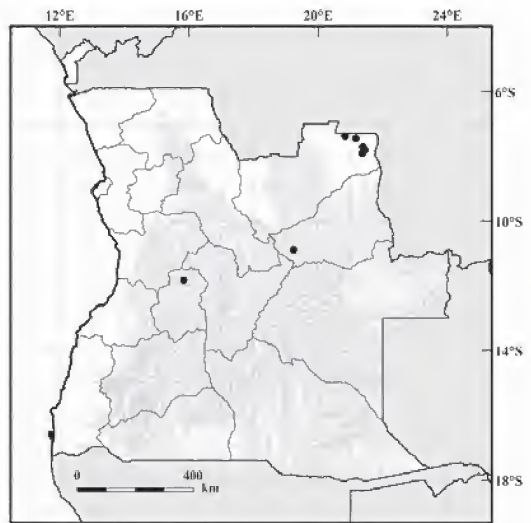
Hyperolius kivuensis multifasciatus: Pickersgill (2007a:325).

Hyperolius (Hyperolius) kivuensis: Frétey et al. (2011:31).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is widespread in savannas of southwestern Ethiopia, south-eastern Sudan, western Kenya, Tanzania, Uganda, Rwanda, and Burundi, eastern and southern Democratic Republic of Congo, Angola, Zambia, Malawi, and northwestern Mozambique.

Occurrences in Angola (Map 44): The species is well documented from northeastern Angola, though may also occur in southern regions. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:16, 1954a:78-79); “Matala, rive gauche de la Tshihumbwe, 40 km à l’est de Dundo” [-7.43333, 21.16667] (Laurent 1950a:16); “Andrada (Luembe O)” [-7.70000, 21.38333] (Laurent 1954a:78); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:16, 1954a:78); “Kossa” [-7.90000, 21.36667] (Laurent 1950:16). **Lunda Sul:** “Alto Chicapa” [-10.88333,

MAP 44. Distribution of *Hyperolius kivuensis* in Angola.

19.23333] (Laurent 1964a:149). **Huambo**: “Bimbi” [-11.81667, 15.83333] (Monard 1938:87). **Undetermined Locality**: “with no precise identification” (Laurent 1954a:78), “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17).

Taxonomic and distributional notes: Poynton and Broadley (1987) recognized that *Hyperolius kivuensis* Ahl, 1931 is easily confused with *Hyperolius quinquevittatus* Bocage, 1866, though they stated that the latter is generally smaller and slimmer. Whereas Laurent (1954a) treated *H. multifasciatus* (Ahl, 1931) as a junior synonym of *H. quinquevittatus*, Pickersgill (2007a) considered it to be a subspecies of *Hyperolius kivuensis*. Schiøtz (1999) and Channing (2001) provided some additional records, though without information about the source.

Hyperolius langi Noble, 1924

LANG’S REED FROG

Hyperolius langi Noble 1924:266, pl. 39, fig. 1. Holotype: AMNH 9983 (collector Mr. Lang). Type locality: “Niapu” Democratic Republic of Congo.

Hyperolius langi: Monard (1937a:40, 1938:95).

Hyperolius platycephalus langi: Cei (1977:17).

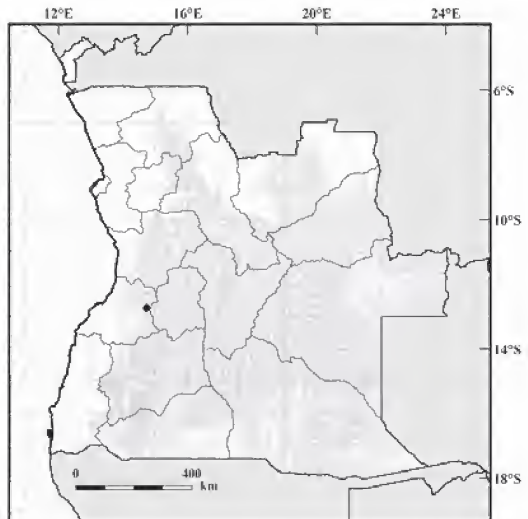
Hyperolius langi: Schiøtz (1999:149), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola, the northeastern Democratic Republic of Congo and Uganda.

Occurrences in Angola (Map 45): The species has been recorded from Benguela Province. **Benguela**: “Ebanga” [-12.73333, 14.73333] (Monard 1937a:40, 1938:95). **Undetermined Locality**: “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes: Monard (1937a, 1938) reported *H. langi* from “Ebanga” in southwestern Angola. There are also two other species of *Hyperolius* that occur at this location, *H. benguellensis* (Bocage, 1893) and *H. bocagei* Steindachner, 1867. The species that Monard (1937a, 1938) identified as *H. langi* probably corresponds to *H. bocagei*, especially as it does not agree with the original description for *H. benguellensis*. However, examination of the type material of *H. langi* is required to confirm this.



MAP 45. Distribution of *Hyperolius langi* in Angola.

Hyperolius maestus Rochebrune, 1885

CABINDA REED FROG (Endemic)

Hyperolius Maestus Rochebrune 1885:91. Type: Presumably in MNHN (collector unknown), unrecognized as a type, if still extant, formerly in Museo Bouvieri. Type locality: “Locum Landana dictum, in foliis Musarum” [= Landana, Cabinda enclave], Angola.

Hyperolius maestus: Frost (1985:212, 2014).

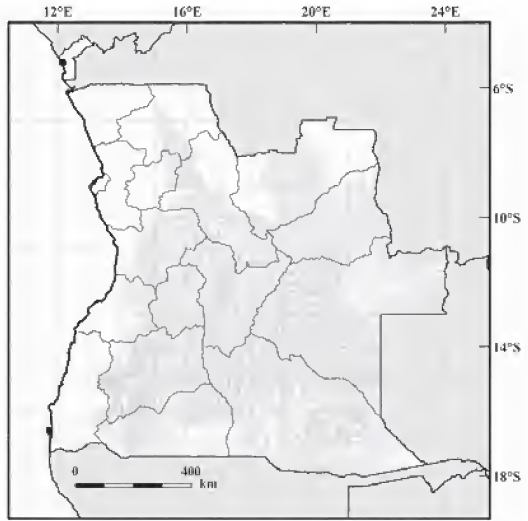
Hyperolius (Hyperolius) marmoratus: Frétey et al. (2011:32).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 46): The species is only known from the type locality “Landana” in the Cabinda enclave. **Cabinda:** “Landana” [-5.21667, 12.15000] (Rochebrune 1885:91; Frost 1985:212, 2016).

Taxonomic and distributional notes: The species was described by Rochebrune (1885) from “Locum Landana dictum, in foliis Musarum” in the Cabinda enclave. Laurent (*in* Frost 1985), and latter Frétey et al. (2011) considered *Hyperolius maestus* Rochebrune, 1885 to be a possible synonym of *Hyperolius marmoratus* Rapp, 1842. The type specimen was deposited in Museo Bouvier and is now presumably in Muséum national d’Histoire naturelle, Paris and unrecognized as a type if it still exists (Frost 2016). The species is not mentioned in Schiøtz (1999) or Channing (2001).



MAP 46. Distribution of *Hyperolius maestus* in Angola.

Hyperolius nasutus Günther, 1865

LARGE-NOSED LONG REED FROG

Hyperolius nasutus Günther 1865a:482, Pl XXXIII, fig. 3. Holotype: BMNH 1947.2.9.68 (collector J.F. Bayão). Type locality: “Duque de Bragança” [= Calandula], Malanje Province, Angola.

Rappia punctulata Bocage 1895a:168. Holotype: MBL T.23-227 (collector Banyures) destroyed by fire 18 March 1978. Type locality: “sur les bords du Quanza” [= Quanza river], Angola.

Hyperolius nasutus: Bocage (1866a:55), Noble (1924:253), Schmidt (1936:132), Loveridge (1936a:109, 1953a:362, 1953:362, 1957:333), Monard (1937a:39, 1938:94), Mertens (1938:429), Frade (1963:254), Haacke (1970:279), Schiøtz (1975:97), Poynton and Broadley (1976:206), Cei (1977:17, 18), Frost (1985:214, 2016), Poynton and Haacke (1993:14), Schiøtz (1999:97, 2006:65), Channing (2001:166), Largen (2001:359), Channing et al. (2002:96), Schiøtz and Van Daele (2003:138), Amiet (2005:275), Conradie et al. (2012a:3), Ceriaco et al. (2016b:35), Conradie et al. (2016:11).

Rappia nasuta: Boulenger (1882:127), Bocage (1895a:169, 1897a:204).

Rappia punctulata: Bocage (1897a:204), Ferreira (1904:112), Amiet (2005:275).

Hyperolius punctulatus: Noble (1924:253), Loveridge (1936a:107, 1936b:405), Mertens (1937:20), Monard (1938:86), Frade (1963:254), Perret (1976a:27), Frost (1985:216).

Hyperolius nasutus nasutus: Laurent (1950a:17, 1954a:84, 1964a:154), Hellmich (1957a:29).

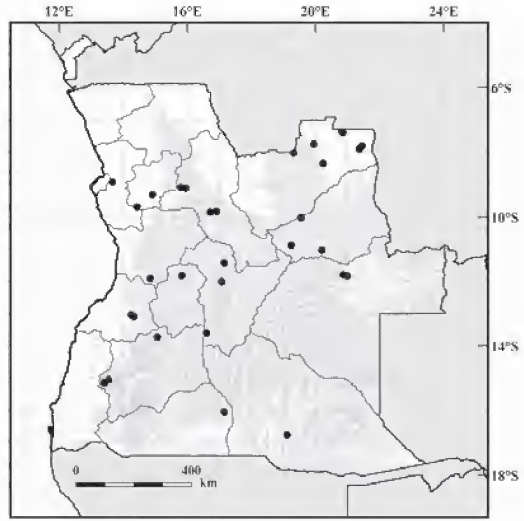
Hyperolius (Hyperolius) nasutus: Frétey et al. (2011:32).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola south to the Okavango Delta of Botswana and adjacent northern Namibia.

Occurrences in Angola (Map 47): The species is known from its type locality “Duque de Bragança, Malanje Province” and is very widespread across almost the whole of the country. **Bengo:** “Cabiri” [-8.91667, 13.66667] (Ferreira 1904:112). **Kwanza Norte:** “3 km W of Salazar” [-9.30000, 14.91667] (Poynton and Haacke 1993:14); “Dondo” [-9.68333, 14.43333] (Loveridge 1936a:107). **Kwanza Sul:** “Namba” [-11.91667, 14.85000] (Poynton and Haacke 1993:14). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Günther 1865a:482; Bocage 1866a:55, 1895a:169, 1897a:204; Boulenger 1882:127; Loveridge 1936a:109, 1936b:405, 1953a:362, 1957:333; Schiøtz 1975:97; Frost 1985:214, 2016; Amiet 2005:275); “Calandula” [-9.07917,

15.79583] (Channing et al. 2013:334); “Kangandala” [-9.82511, 16.91225] (Channing et al. 2013:334); “Cangandala National Park” [-9.84606, 16.72233] (Ceríaco et al. 2016b:35); **Lunda Norte**: “Dundo” [-7.36667, 20.83333] (Laurent 1954a:84); “environs de Dundo, rives de la Luachimo” [-7.38333, 20.85000] (Laurent 1950a:17); “Carumbo lagoon” [-7.74422, 19.95467] (Conradie et al. 2012a:3); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:17); “Kossa à 100 km au sud-est de Dundo” [-7.90000, 21.36667] (Laurent 1950a:17); “rive de la Tchihumbwe 40 km à l’est de Dundo” [-8.01667, 19.31667] (Laurent 1950a:17); “Village Capaia” [-8.33847, 20.24250] (Conradie et al. 2012a:3). **Lunda Sul**: “Dala” [-11.03333, 20.20000] (Monard 1937a:39, 1938:94); “Alto Chicapa, sources du Cuílo” [-10.88333, 19.23333] (Laurent 1964a:154); “Alto Cuílo, rives du Cuílo” [-10.01667, 19.55000] (Laurent 1964a:154). **Moxico**: “région du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:154); “réserve de chasse de Cameia” [-11.83333, 21.00000] (Laurent 1964a:154). **Bié**: “Chitau” [-11.43333, 17.15000] (Schmidt 1936:132); “General Machado” [-12.01667, 17.06667] Mertens (1937:20). **Huambo**: “Bimbi” [-11.81667, 15.83333] (Monard 1937a:39, 1938:94); “Tongrube am Jamba Fließchen” [-13.60000, 16.60000] (Hellmich 1957a:29). **Benguela**: “Cubal” [-13.03333, 14.25000] (Mertens 1938a:429); “Marco de Canavezes (Cubal da Ganda)” [-13.08333, 14.33333] (Laurent 1964a:154). **Huíla**: “Huilla” [-15.05000, 13.55000] (Bocage 1895a:169, 1897a:204); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:169, 1897a:204); “Kalukembé” [-15.05000, 13.55000] (Monard 1938:86); “Nuntechite lagoon” [-15.13333, 13.41667] (Poynton and Haacke 1993:14). **Cunene**: “Chimporo” [-16.03333, 17.15000] (Monard 1937a:39, 1938:94). **Quando Cubango**: “Kuandu” [-16.74487, 19.10136] (Monard 1937a:39, 1938:94). **Undetermined Locality**: “Margens do Cuanza” (Bocage 1895a:168, 1897a:204; Loveridge 1936a:107, 1957:333; Perret 1976a:27; Frost 1985:216; Amiet 2005:275); “without precise location” (Monard 1937a:39, 1938:94); “Western subregion and Angolan highlands (Angolan coastal or watersheds)” (Frade 1963:254); “Zambeian highlands” (Frade 1963:254); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17); “plateaus regions” (Cei 1977:17); “arid territories along the coast” (Cei 1977:18).



MAP 47. Distribution of *Hyperolius nasutus* in Angola.

Taxonomic and distributional notes: While the type specimen of *R. punctulata* is now lost, Channing et al. (2013) included it as a synonym of *H. nasutus*, for which there are many junior synonyms. To date, fifteen names have been used for members of the *nasutus* group, most of which have been synonymized with the nominotypical form (Schlötter 1999); a relatively recent list of these synonyms is provided by Amiet (2005). Poynton and Broadley (1987) recognized three species in the southern African savanna, *Hyperolius viridis* Schlötter, 1975, *Hyperolius nasutus* Günther, 1865 and *Hyperolius benguellensis* Bocage, 1893. Schlötter (1999) including *H. benguellensis* as a synonym of *H. nasutus* after arguing that differences in morphology and color pattern are not sufficient for distinguishing these two species. Later, Channing et al. (2002) retained *H. benguellensis* as a synonym of *nasutus*, but also divided the group into three cryptic species differing in advertisement call: *Hyperolius acuticeps* Ahl, 1931, *Hyperolius viridis* Schlötter, 1975,

and *H. nasutus* (Schjötz and Van Daele 2003; Schjötz 2006). Schjötz (2006) distinguished two species, *H. benguellensis* and *H. nasutus*, in the *nasutus* group for Angola based on the structure of the advertisement call and color pattern. This widespread species is common in savannas and exhibits a preference for humid areas such as reeds growing in deep water, pools, streams, and large rivers (Schjötz 1999; Channing 2001).

***Hyperolius nitidulus* Peters, 1875**

PLAIN REED FROG

Hyperolius nitidulus Peters 1875:209, pl. 3, figs. 4, 4a. Holotype: ZMB 7729 *fide* Bauer et al. (1995:44) (collector R. Buchholz). Type locality: “Yoruba (Lagos)” (Peters 1875:209), Nigeria.

Hyperolius nitidulus: Peters (1877a:619), Schjötz (1999:206), Wieczorek et al. (2000:1238-1241), Rödel et al. (2010:178), Amiet (2012:194), Frost (2016).

Global conservation status (IUCN):

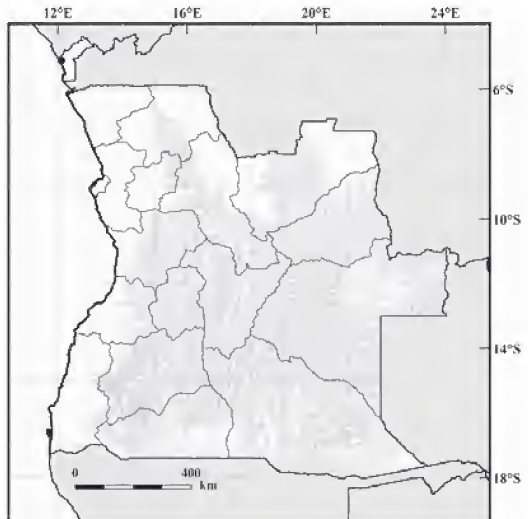
Least Concern.

Global distribution: The species is known from West African extending from Guinea east into Nigeria, Angola and Cameroon.

Occurrences in Angola (Map 48): The species was cited from “Chinchoxo” in the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:619).

Taxonomic and distributional notes:

According to Wieczorek et al. (2000), the species *Hyperolius nitidulus* Peters, 1875 is a West African species associated with savanna and woodlands (Schjötz 1999; Wieczorek et al. 2000; Rödel et al. 2010; Amiet 2012). Based on the distribution of the species delimited by Wieczorek et al. (2000), the record from north-western Angola is likely a misidentification.



MAP 48. Distribution of *Hyperolius nitidulus* in Angola.

***Hyperolius ocellatus* (Günther, 1858)**

GOLDEN-EYED REED FROG

Hyperolius ocellatus Günther 1858a:326. Lectotype: BMNH 1947.2.9.22, (collector L. Fraser), formerly BMNH 51.11.13.48, by implication of being referred to as “holotype” by Perret (1975a:27), Syntypes: BMNH [2 specimens] (collector Mr. Fraser, for the “Fernando Po” specimen) (Günther 1858a:326). Type locality: “Fernando Po” [= Bioko, Guinea] *fide* Perret (1975a:24), who considered “Angola” an error. Originally given as “Fernando Po” and “Angola” by Günther (1858a:326).

Hyperolius Lucani Rochebrune 1885:91. Type: Presumably in MNHP (collector unknown), uncatalogued as a type, if still extant, formerly in Museo Bouvieri. Type locality: “Locam Landana dictum, in frondibus Borassorum” [= Landana, Cabinda enclave] Cabinda enclave, Angola.

Hyperolius ocellatus: Günther (“1858b” 1859:88), Perret (1975a:24), Cei (1977:17), Frost (1985:214, 2016), Schjötz (1999:141), Channing (2001:168), Channing et al. (2012:217).

Rappia ocellata: Boulenger (1882:123); Bocage (1895a:165).

Hyperolius lucani: Frost (1985:212, 2016).

Hyperolius (*Hyperolius*) *ocellatus*: Frétey et al. (2011:32).

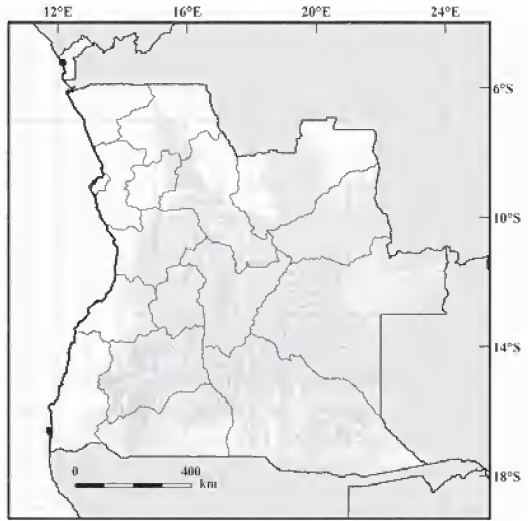
Global conservation status (IUCN): Least Concern.

Global distribution: The species is from tropical Central Africa. It occurs in the Cabinda

enclave in Angola, extending north into south-eastern Nigeria and Bioko Island, east across Democratic Republic of Congo, with possibly occurrences in western Uganda and Rwanda.

Occurrences in Angola (Map 49): The species is recorded from northwestern Angola in the Cabinda enclave. **Cabinda:** “Landana” [-5.21667, 12.15000] (Rochebrune 1885:91; Frost 1985:212, 2016); “Cabinda” (Schlötz 1999:141; Channing 2001:169).

Taxonomic and distributional notes: Günther (1858a) described *Hyperolius ocellatus* from “Fernando Pó” and “Angola,” the latter without clear indication of the locality based on two specimens deposited in British Museum. Perret (1975a) considered the type locality “Angola” to be in error and designated the lectotype as being from “Fernando Pó.” Following Günther’s (1858a) description, Rochebrune (1885) described a new species from “Locam Landana dictum, in frondibus Borassorum” in the Cabinda enclave as *Hyperolius lucani*. This may be a synonym of *Hyperolius ocellatus* (Laurent in Frost 1985, 2016; Frétey et al. 2011), although it is not mentioned by Schlötz (1999) or Channing (2001).



MAP 49. Distribution of *Hyperolius ocellatus* in Angola.

Hyperolius platyceps (Boulenger, 1900)

BENITO RIVER REED FROG

Rappia platyceps Boulenger 1900:444, pl. 27, fig. 4. Syntypes: BMNH 1947.2.9.57–58 and BMNH 1900.2.17.89–90 [2 specimens] (collector G.L. Bates, formerly BMNH 1900.2.17.89–90). Type locality: “Benito River, north of the Gaboon River between 20 and 30 miles inland from the coast, Gaboon” [= Benito River], Equatorial Guinea.

Rappia bivittata Ferreira 1906:161, pl. 1. Syntypes: MHNFCP 229 017291, 017296 and 017302, [3 specimens] (collector F. Newton). Type locality: “N’Golla Bumba”, “Quilombo” [= Gonguembo] and “Rio Luinha”, Kwanza Norte Province, Angola.

Rappia platyceps var. *angolensis* Ferreira 1906:161, pl. 1. Syntype: MHNFCP 017303 (Quilombo) (collector F. Newton), the other syntype from “N’golla Bumba” was not located. Type locality: “N’Golla Bumba” and “Quilombo” [= Gonguembo], Kwanza Norte Province, Angola.

Rappia fasciata Ferreira 1906:164, pl. 1. Holotype: MHNFCP 017294 (collector F. Newton). Type locality: “Quilombo” [= Gonguembo] Kwanza Norte Province, Angola.

Hyperolius angolanus Ahl 1931b:271. Replacement name for *Rappia platyceps* var. *angolensis*.

Rappia platyceps: Ferreira (1906:161).

Hyperolius platyceps: Noble (1924:253), Ceriaco et al. (2014a:24), Frost (2016).

Hyperolius angolanus Laurent (1950a:15), Frost (1985:207).

Hyperolius platyceps angolanus: Laurent (1954a:77), Cei (1977:17).

Hyperolius fasciatus: Noble (1924:252), Cei (1977:17), Frost (1985:210).

Hyperolius ferreirai: Frost (1985:210).

Hyperolius (*Hyperolius*) *platyceps*: Frétey et al. (2011:33).

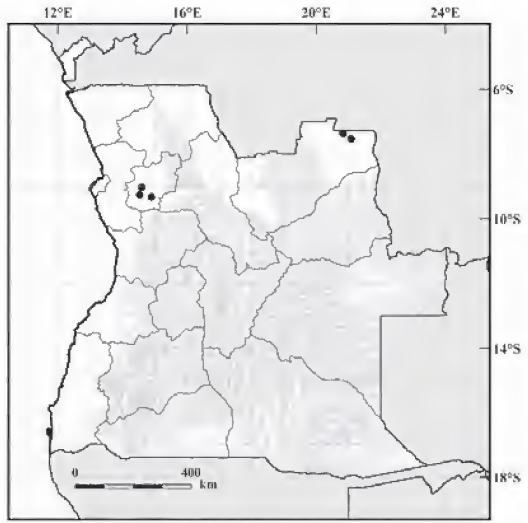
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southern Cameroon to the southwestern Central African Republic, south to the Democratic Republic of Congo and northwestern Angola.

Occurrences in Angola (Map 50): The species occurs in the north of the country. **Lunda**

Norte: “Dundo” [-7.53333, 21.08333] (Laurent 1950a:15); “Luachimo” [-7.36667, 20.83333] (Laurent 1954a:77). **Kwanza Norte:** “N’golla Bumba” [-9.03333, 14.60000] (Ferreira 1906:161; Frost 1985:207, 210; Ceriaco et al. 2014a:23); “Rio Luinha” [-9.26667, 14.53333] (Ferreira 1906:161; Frost 1985:210); “Quilombo” [-9.33333, 14.90000] (Ferreira 1906:161, 164; Frost 1985:210, 2016; Ceriaco et al. 2014a:22).

Taxonomic and distributional notes: Ahl (1931a) elevated *Rappia platyceps* var. *angolensis* Ferreira, 1906. to full species and proposed the replacement name *Hyperolius angolanus* because of the the name was preoccupied by *Hyperolius marmoratus* var. *angolensis* Steindachner, 1862 (Ceriaco et al. 2014a). Ferreira (1906) also described as new *Rappia fasciata* from “Quilombo” and *Rappia bivittata* from “N’golla Bumba”, “Quilombo,” and “Rio Luinha.” Recently Frétey et al. (2011) and Ceriaco et al. (2014a) recognized *Hyperolius platyceps angolensis*, *Rappia fasciata*, and *Rappia bivittata* as synonyms of *H. platyceps*.



MAP 50. Distribution of *Hyperolius platyceps* in Angola.

Hyperolius polli Laurent, 1943

TSHIMBULU REED FROG

Hyperolius polli Laurent 1943b:96, fig. 20. Holotype: MRAC 656 (collector Achten). Type locality: “Tshimbulu s/Luebi (Kasai)” Democratic Republic of Congo.

Hyperolius polli: Laurent (1954a:78).

Hyperolius polli: Schiøtz (1999:153), Frost (2016)

Hyperolius (*Hyperolius*) *polli*: Frétey et al. (2011:33).

Global conservation status (IUCN):

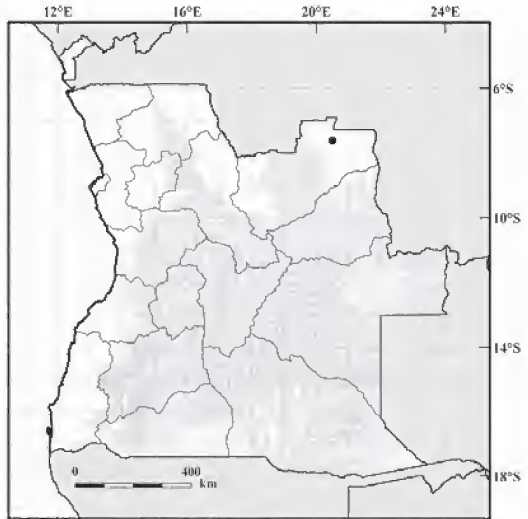
Data Deficient.

Global distribution: The species is known from the Democratic Republic of Congo and adjacent Angola.

Ocurrences in Angola (Map 51): The single species record is in Lunda Norte Province near the border with Congo. **Lunda Norte:** “Tshinguvu, Riv. Tshikapa” [-7.61667, 20.50000] (Laurent 1954a:78).

Taxonomic and distributional notes:

According to Laurent (1954a), the specimen from “Tshinguvu (Tshikapa)” is similar to *Hyperolius cinnamomeoventris* Bocage, 1866, but differs in some morphological characters. Currently it remains poorly known and its validity is uncertain.



MAP 51. Distribution of *Hyperolius polli* in Angola.

Hyperolius protchei* Rochebrune, 1885*ROCHEBRUNE'S REED FROG (Endemic)**

Hyperolius Protchei Rochebrune 1885:92. Type: Presumably in MNHP (collector unknown), uncatalogued as a type, if still extant, formerly in Museo Bouvieri. Not cited by Guibé (1950). Type locality: "Locum Landana dictum, in foliis Musarum" [= Landana, Cabinda enclave], Angola.

Hyperolius protchei: Frost (1985:215, 2016).

Hyperolius (Hyperolius) marmoratus: Frétey et al. (2011:32).

Global conservation status (IUCN):

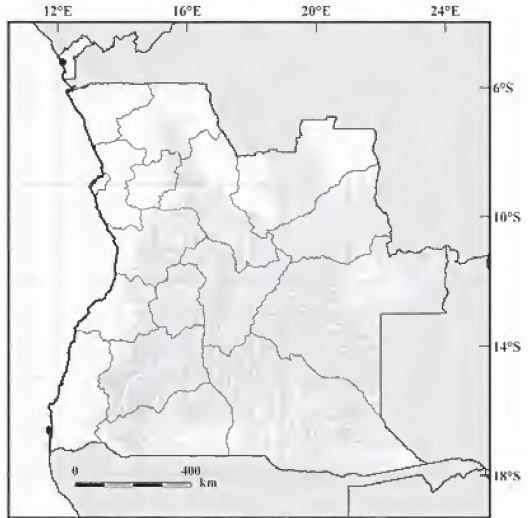
Data Deficient.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 52): The species is only known from the type locality "Landana" in the Cabinda enclave. **Cabinda:** "Landana" [-5.21667, 12.15000] (Rochebrune 1885:92; Frost 1985:215, 2016).

Taxonomic and distributional notes:

Laurent (*in* Frost 1985) considered *Hyperolius protchei* as a possible synonym of *Hyperolius marmoratus* Rapp, 1842, which in Angola should be considered *Hyperolius angolensis* Steindachner, 1867 (see *Hyperolius angolensis* account). The species is not mentioned by Schiøtz (1999) or Channing (2001).



MAP 52. Distribution of *Hyperolius protchei* in Angola.

Hyperolius pusillus* (Cope, 1862)*WATER LILLY REED FROG**

Crumenifera pusilla Cope 1862:343. Holotype: ANSP 11323 (collector unknown) *fide* Malnate (1971:352).

Type locality: "Umvoti," KwaZulu-Natal, South Africa.

Hyperolius microps: Bocage (1866a:55, 1866b:75), Frade (1963:254), Noble (1924:253).

Rappia microps: Bocage (1895a:173, 1897a:204), Boulenger (1882:127; 1905:110).

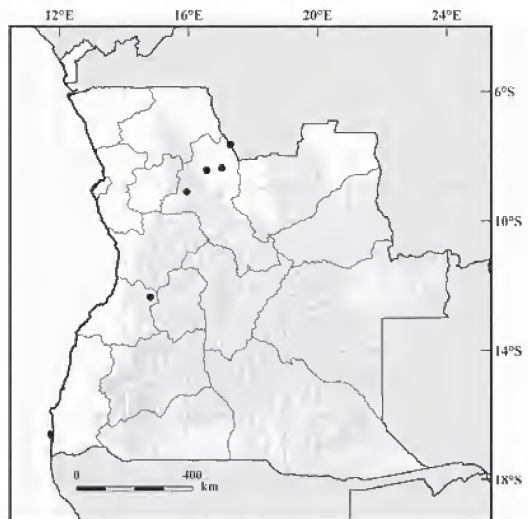
Hyperolius pusillus: Cei (1977:17), Schiøtz (1999:185), Channing (2001:176).

Global conservation status (IUCN):

Least Concern.

Global distribution: The species is restricted to the eastern Africa coastal lowlands, from Somalia to KwaZulu-Natal.

Occurrences in Angola (Map 53): Specimen records are from Malanje and Benguela Province. **Malanje:** "Fort Don Carlos" [-7.65000, 17.30000]; (Boulenger 1905:110); "Marimba" [-8.36667, 17.03333] (Boulenger 1905:110); "Bange N'gola" [-8.43333, 16.56667] (Boulenger 1905:110); "Duque de Bragança" [-9.10000, 15.95000] (Bocage 1866a:55, 1866b:75, 1895a:173, 1897a:204). **Benguela:** "Cahata" [-12.35000, 14.81667] (Bocage 1895a:173, 1897a:204). **Undetermi-**



MAP 53. Distribution of *Hyperolius pusillus* in Angola.

ned Locality: “bords du Quanza” (Bocage 1895a:173, 1897:204); “Rio Quando” (Bocage 1895a:173, 1897a:204); “Zambeian highlands” (Frade 1963:254); “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes: Boulenger (1882) noted that this is an East African species, although he recognized (Bocage 1866b) *Hyperolius microps* as a valid name. Based on this information, the Angolan records possibly belong to another *Hyperolius* species and it would be important to review this case. Unfortunately, the specimens from Museu Bocage (Bocage 1866b, 1895a, 1897a) were destroyed in the 1978 fire, although the specimens studied by Boulenger (1905) still exist in the British Museum. Noble (1924) also cited specimens of *H. pusillus* and *H. microps* in the collections of the American Museum of Natural History from Angola, though without precise locality information.

Hyperolius quinquevittatus Bocage, 1866

FIVE-STRIPED REED FROG

Hyperolius quinquevittatus Bocage 1866a:56. Syntypes: MBL 24-214, 24-215 [2 specimens] (collector F.A.P. Bayão). Type locality: “Duque de Bragança” [= Calandula], Malanje Province, Angola.

Hyperolius quinquevittatus: Bocage (1866b:77), Frade (1963:254), Noble (1924:253), Laurent (1950A:16, 1954a:79), Perret (1976a:25), Cei (1977:17), Frost (1985:216, 2016), Schiøtz (1999:101), Channing (2001:178), Channing and Howell (2006:180).

Rappia quinquevittata: Bocage (1895a:174).

Hyperolius quinquevittatus quinquevittatus: Schiøtz (1975:102), Poynton and Broadley (1987:197), Pickersgill (2007a:360).

Hyperolius (Hyperolius) quinquevittatus: Frétey et al. (2011:33).

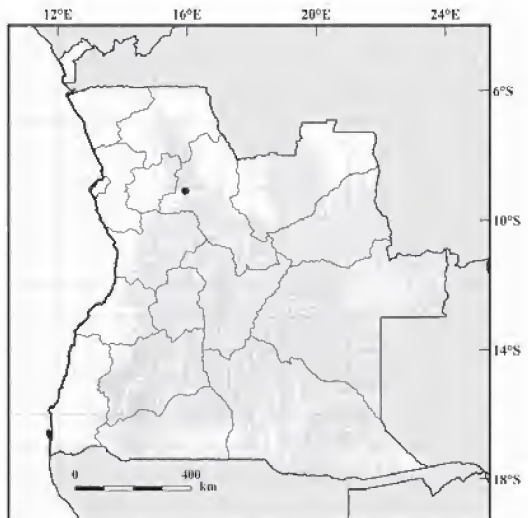
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from open savannas at higher elevations in northern Angola, the southern Democratic Republic of Congo, southern Tanzania, and northern Zambia and Malawi, and Mt. Namuli in northern Mozambique.

Ocurrences in Angola (Map 54): The species occurs especially in northern Angola. **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:56, 1866b:77, 1895a:174; Schiøtz 1975:102; Perret 1976a:25; Frost 1985:216, 2016; Poynton and Broadley 1987:197; Pickersgill 2007a:360). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17); “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes:

According to Perret (1976a), the syntypes described by Bocage (1866a), which were destroyed in the 1978 fire in Lisbon, were studied by Schiøtz (1975) when he concluded that *H. quinquevittatus* is similar in morphology to *H. nasutus* Günther, 1865. Poynton and Broadley (1987) noted, however, that *Hyperolius quinquevittatus* is more similar to *Hyperolius kivuensis* even if *H. quinquevittatus* is in general much smaller and slimmer. Pickersgill



MAP 54. Distribution of *Hyperolius quinquevittatus* in Angola.

(2007a) suspected that the species belongs to the *multifasciatus* group, while Frétey et al. (2011) included the *H. multifasciatus* in the synonym of *quinquevittatus*.

***Hyperolius raymondi* Conradie, Branch and Tolley, 2013 RAYMOND’S REED FROG (Endemic)**

Hyperolius raymondi Conradie et al. 2013:203, fig. 7. Holotype: PEM A10049 (collectors W. Conradie, W. Branch, P. Vaz Pinto, S. Batista and N. Batista). Type locality: “Lagoa Carumbo from a dambo near the expedition base camp,” Lunda Norte Province, Angola.

Hyperolius cinereus: Laurent (1964a:149), Schiøtz (1999:192), Channing (2001:152).

Hyperolius (Hyperolius) cinereus: Frétey et al. (2011:30).

Hyperolius raymondi: Frost (2016).

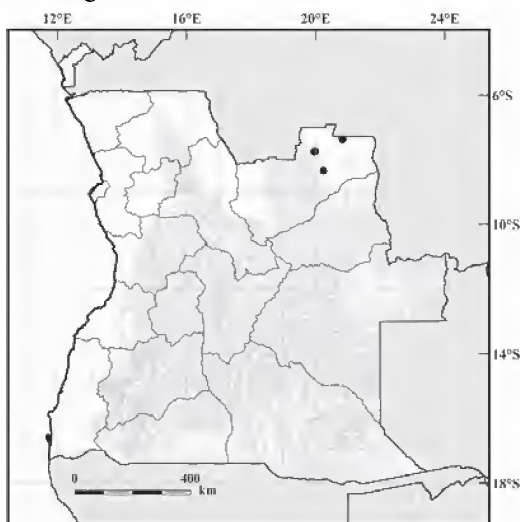
Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known from Angola.

Ocurrences in Angola (Map 55): The species is known from the type locality “Lagoa Carumbo” and from surrounding localities in Lunda Norte Province. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:149; Channing 2001:153; Conradie et al. 2013:203); “margins Lagoa Samokaza east of Lagoa Carumbo” [-7.73833, 19.98694] (Conradie et al. 2013:203); “Lagoa Carumbo from a dambo near the expedition base camp” [-7.74422, 19.95522] (Conradie et al. 2013:203; Frost 2016); “headwaters of Lovua, north of village Capaia” [-8.33847, 20.24250] (Conradie et al. 2013:203).

Taxonomic and distributional notes:

Populations that Laurent (1964a) referred to *H. cinereus* were recognized by Conradie et al. (2013a) as a distinct species and described as *H. raymondi* (see further discussion above in account for *H. cinereus*). This newly described species is so far endemic to Angola, but may also occur in southernmost Democratic Republic of Congo and northwest Zambia. It is found in grass-covered “dambo” (water levels less than 30 cm) in the flood plains of the Lulele River, a southern tributary draining north to the larger Congo River (Conradie et al. 2013).



MAP 55. Distribution of *Hyperolius raymondi* in Angola.

***Hyperolius rhizophilus* Rochebrune, 1885**

AFRICAN REED FROG (Endemic)

Hyperolius Rhizophilus Rochebrune 1885:92. Type: Presumably in MNHN (collector unknown), uncatalogued as a type, if still extant, formerly in Museo Bouvieri. Not cited by Guibé (1950). Type locality: “Locum Landana dictum, in foliis rhizophorarum” [= Landana, Cabinda enclave], Cabinda Province, Angola.

Hyperolius rhizophilus Rochebrune, 1885: Frost (1985:215, 2016).

Hyperolius (Hyperolius) rhizophilus Rochebrune, 1885: Frétey et al. (2011:33).

Global conservation status (IUCN): Data Deficient.

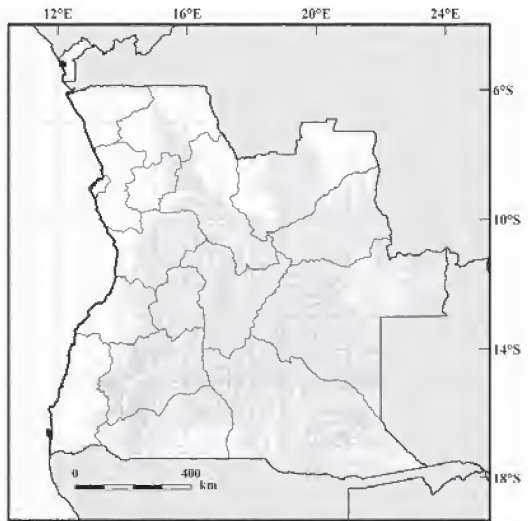
Global distribution: The species is known only from Angola.

Ocurrences in Angola (Map 56): The species is only known from the type locality “Landana”

in the Cabinda enclave. **Cabinda:** “Landana” [-5.21667, 12.15000] (Rochebrune 1885:92; Frost 1985:215, 2016).

Taxonomic and distributional notes:

The species was described by Rochebrune (1885) from “Locum Landana dictum, in foliis rhizophorarum” in the Cabinda enclave. The type specimen was deposited in the Museo Bouvier, now presumably in the Muséum national d’Histoire naturelle, Paris (Frost 2016). The species is not mentioned in Schiøtz (1999) or Channing (2001).



MAP 56. Distribution of *Hyperolius rhizophilus* in Angola.

***Hyperolius steindachneri* Bocage, 1866**

STEINDACHNER’S REED FROG

Hyperolius steindachneri Bocage 1866a:55. Holotype: MBL T.25-226 (collector F.A.P. Bayão). Type locality: “Duque de Bragança” [= Calandula], Malanje Province, Angola.

Hyperolius machadoi Laurent 1954a:80, figs. 22, 23. Holotype: MD 495 (collector unknown, presumably A.B. Machado). Type locality: “Camissombo” Lunda Norte, Angola.

Hyperolius steindachneri: Bocage (1866b:75), Noble (1924:253), Loveridge (1936a:103), Perret (1976a:25), Cei (1977:17), Frost (1985:218, 2016), Poynton and Haacke (1993:15), Schiøtz (1999:144), Channing (2001:182), Conradie et al. (2012a:3).

Rappia steindachneri: Bocage (1895a:171, 1897a:204).

Hyperolius steindachneri steindachneri: Laurent (1950a:16, 1954a:79, 1961:75, 1964a:151).

Hyperolius machadoi: Frade (1963:254), Cei (1977:17).

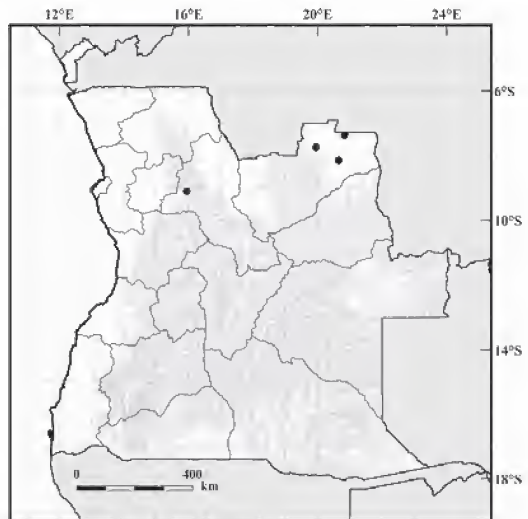
Hyperolius (Hyperolius) steindachneri: Frétey et al. (2011:33).

Global conservation status (IUCN):

Least Concern.

Global distribution: The species is known from the southern Democratic Republic of Congo to northern central-east of Angola and Zambia.

Ocurrences in Angola (Map 57): The species occurs in northern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:16, 1954a:79, 80, 1964a:151); “Lagoa Carumbo” [-7.74422, 19.95522] (Conradie et al. 2012a:3); “Camissombo” [-8.15000, 20.65000] (Laurent 1954a:80). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:55, 1866b:75, 1895a:171, 1897a:204; Loveridge 1936a:103;



MAP 57. Distribution of *Hyperolius steindachneri* in Angola.

Perret 1976a:25; Frost 1985:218, 2016; Poynton and Haacke 1993:15). **Undetermined Locality:** without precise locality (Laurent 1954a:79); “areas of forest and savanna in the north and northeast of Angola” (Ceï 1977:17); “plateaus regions” (Ceï 1977:17).

Taxonomic and distributional notes: The holotype was destroyed in the 1978 fire in the zoological collections in Museu Bocage. Laurent (1954a) described *Hyperolius machadoi* (Laurent, 1954) from “Camissombo” in Lunda Norte Province, but then later Laurent (1964a) synonymized it with *H. steindachneri*. The only recent report of this species was by Conradie et al. (2012a) who reported several specimens referred to as *H. cf. steindachneri* from Lagao Carumbo in Lunda Norte.

Hyperolius vilhenai Laurent, 1964

VILHENA’S REED FROG (Endemic)

Hyperolius vilhenai Laurent 1964a:155. Holotype: MD 6213 (collector A. Barros Machado). Type locality: “galerie forestière de la rivière, Luíta, Poste de Cuílo” [= Luíta], Lunda Norte Province, Angola.

Hyperolius vilhenai: Ceï (1977:17), Frost (1985:219, 2016), Schiøtz (1999:155); Channing (2001:184).

Hyperolius (Hyperolius) vilhenai: Frétey et al. (2011:33).

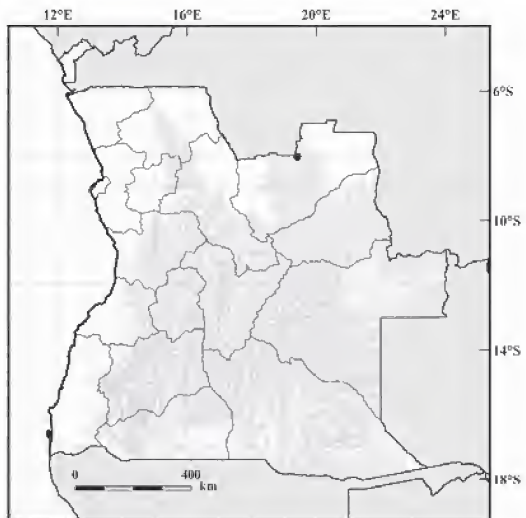
Global conservation status (IUCN):

Data Deficient.

Global distribution: The species is known only from northernmost Angola.

Ocurrences in Angola (Map 58): The species is known only from the type locality (northern Angola). **Lunda Norte:** “galerie forestière de la rivière, Luíta, Poste de Cuílo” [-8.03333, 19.41667] (Laurent 1964a:155; Frost 1985:219, 2016).

Taxonomic and distributional notes: If valid, the species is also likely to be found in the adjacent Democratic Republic of Congo (Frost 1985, 2016, Schiøtz 1999; Channing 2001).



MAP 58. Distribution of *Hyperolius vilhenai* in Angola.

Genus *Kassina* Girard, 1853

Kassina kuvangensis (Monard, 1937)

KUVANGU KASSINA

Cassiniopsis kuvangensis Monard 1937a:41, fig. 19. Holotype: MHNC 90.0012 (collector A. Monard). Type locality: Not stated in the original description but given as “Kuvangu,” Angola by Monard (1938:97).

Cassiniopsis kuvangensi: Monard (1938:97), Ceï (1977:17).

Kassina kuvangensis: Schiøtz (1975:61), Frost (1985:224, 2016), Poynton and Broadley (1987:179), Schiøtz (1999:245), Channing (2001:187), Frétey et al. (2011:35), Channing et al. (2012:233).

Global conservation status (IUCN): Least Concern.

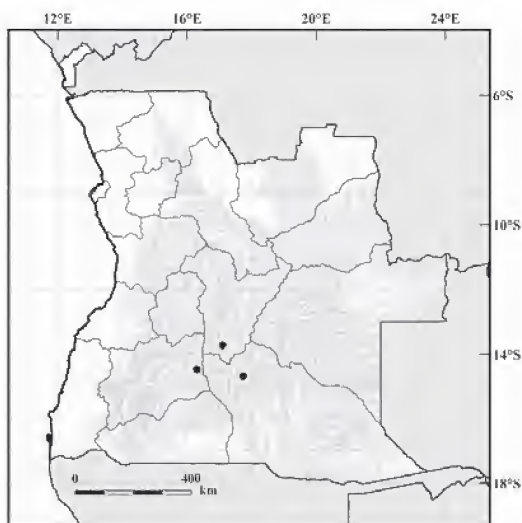
Global distribution: The species is known from Angola and Zambia.

Ocurrences in Angola (Map 59): The species is known for “Kuvangu,” south-central Angola. Bié: “Cubango basin (10)” [-13.71616, 17.09661] (Conradie et al. 2016: 8-9, 15). Huíla: “Kuvangu” [-14.46667, 16.30000] (Monard 1938:97; Frost 1985:224, 2016; Poynton and Broadley

1987:179; Schiøtz 1975:61, 1999:247; Channing 2001:188). Cuando Cubango: “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9, 15).

Taxonomic and distributional notes:

The type locality was for some time the only known record for *K. kuvangensis*. Recently, Conradie et al. (2016) cited the species from Cuando Cubango region. Other authors have also identified populations in Zambia as this species (Schiøtz 1999; Channing 2001).



MAP 59. Distribution of *Kassina kuvangensis* in Angola.

***Kassina maculosa* (Sternfeld, 1917)**

MARBLED RUNNING FROG

Megalixalus maculosus Sternfeld 1917:501, pl. 24, fig. 11. Lectotype: SMF 7249 designated lectotype by Mertens (1967:48). Original syntypes SMF [2 specimens] (collector Schubotz). Type locality: “Duma, Ubangi” *fide* (Frost 2016), Democratic Republic of Congo.

Kassina maculosa: Schiøtz (1999:241), Frétey et al. (2011:35), Frost (2016).

Kassina cf. maculosa: Ceriaco et al. (2014b:669).

Global conservation status (IUCN):

Least Concern.

Global distribution: The species is known from Cameroon, Central African Republic, the northern Democratic Republic of Congo, and Angola.

Occurrences in Angola (Map 60): The species is recorded from Malanje Province.

Malanje: “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:669).

Taxonomic and distributional notes:

Ceriaco et al. (2014b), following the discussion of morphological traits provided by Amiet (2012), identified one specimen from “Capanda” as possibly representing *Kassina maculosa* (Sternfeld, 1917). If correct, this specimen would be the first record for and the southernmost record of the species (Ceriaco et al. 2014b).



MAP 60. Distribution of *Kassina maculosa* in Angola.

Kassina senegalensis* (Duméril and Bibron, 1841)*SENEGAL KASSINA**

Cystignathus Senegalensis Duméril and Bibron 1841:419. Syntypes: MNHN 4507 [2 specimens] (collector Heudelot) *vide* R. Laurent *in* Frost (1985:225). Type locality: “envoyée du Sénégal (...) dans les étangs environs de Galam” (Duméril and Bibron 1841:419), Senegal.

Kassina angeli: Schmidt (1936:132).

Kassina senegalensis angeli: Laurent (1954a:76, 1964a:148).

Kassina senegalensis: Monard (1938:96), Inger (1959:541), Poynton and Haacke (1993:14), Blackburn and Scali (2014:30).

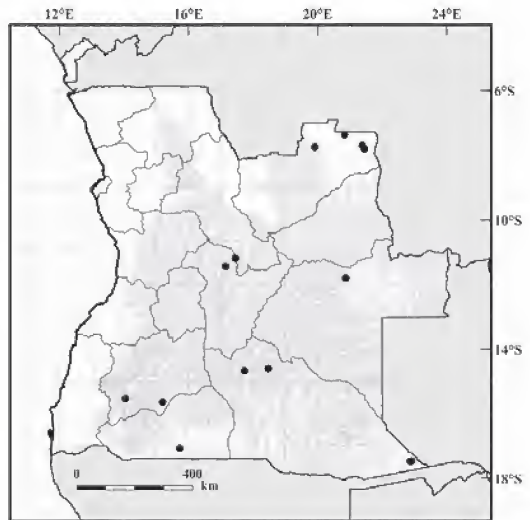
Kassina senegalensis microps: Cei (1977:17, 18).

Kassina senegalensis: Frost (1985:225, 2016), Schiøtz (1999:232), Channing (2001:191), Frétey et al. (2011:35).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is widely distributed in sub-Saharan Africa from Senegal east to Uganda and Kenya and south to Namibia in the west and KwaZulu-Natal, South Africa in the east.

Ocurrences in Angola (Map 61): The species occurs from extreme northeast to south-central Angola, it appears not to occur in the northwestern regions. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:148); “Route Dundo-Caluango road, Rivière Luchico” [-7.75000, 19.91667] (Laurent 1964a:148); “Andrada (Luembe O)” [-7.70000, 21.38333] (Laurent 1954a:76); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1954a:76); “River du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:148). **Moxico:** “banks of Calundo lake, Moxico” [-11.80000, 20.86667] (Laurent 1964a:168). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1936:132); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:132). **Huíla:** “Viriamundo” [-15.53333, 14.05000] (Poynton and Haacke



MAP 61. Distribution of *Kassina senegalensis* in Angola.

1993:14); “Molundo” [-15.63333, 15.20000] (Monard 1938:96). **Cunene:** “5 km W of Pereira de Eça” [-17.06667, 15.73333] (Poynton and Haacke 1993:14). **Cuando Cubango:** “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9, 16); “Cuito basin (24)” [-14.60622, 18.46722] (Conradie et al. 2016:8-9, 16); “Cuando basin (39)” [-17.46333, 22.86638] (Conradie et al. 2016:9-10, 16); “Cuando basin (40)” [-17.45786, 22.91191] (Conradie et al. 2016:9-10, 16).

Taxonomic and distributional notes: According to Laurent (*in* Frost 1985), Largen (1975) mentioned that *K. senegalensis* may comprise several cryptic species.

Family Arthroleptidae Mivart, 1869**Genus *Arthroleptis* Smith, 1849*****Arthroleptis carquejai* Ferreira, 1906****CARQUEJA'S SQUEAKER (Endemic)**

Arthroleptis carquejai Ferreira 1906, pl. 1:165. Holotype: MNHFCP 018586 (collector F. Newton). Type locality: “Cambondo” (Ferreira 1906:165) Kwanza Norte, Angola.

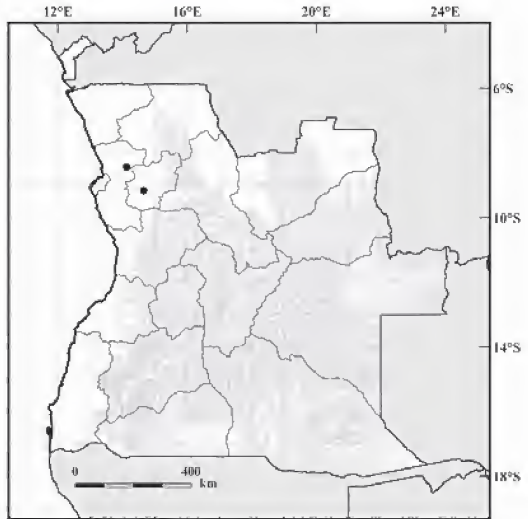
Arthroleptis carquejai: Cei (1977:16), Frost (1985:15, 2016), Ruas (1996:28), Channing (2001:42), Frétey et al. (2011:24), Ceriaco et al. (2014a:27).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known only from Angola.

Ocurrences in Angola (Map 62): The species is known only from northern Angola. **Luanda:** “Roca Novo (Roca Novo Mundo)” [-8.433333, 14.13036] (Ceriaco et al. 2014a:27). **Kwanza Norte:** “Cambondo” [-9.15963, 14.65827] (Ferreira, 1906:165; Frost 1985:15, 2016; Ruas 1996:28; Channing 2001:42; Ceriaco et al. 2014a:27).

Taxonomic and distributional notes: Ceriaco et al. (2014a) recognized *Arthroleptis carquejai* Ferreira, 1906 as a valid species probably related to a group of species including *Arthroleptis variabilis* Matschie, 1893. To date it is known only from Angola, although it likely occurs in the southern Democratic Republic of Congo and possibly Gabon.



MAP 62. Distribution of *Arthroleptis carquejai* in Angola.

Arthroleptis lameerei de Witte, 1921

LAMEER'S SQUEAKER

Arthroleptis lameerei de Witte 1921:12. Syntypes: MRAC [5 specimens], *vide* R. Laurent in Frost (1985:19) (collector Mission Lemaire). Type locality: “Lofoi (Katanga),” Democratic Republic of Congo.

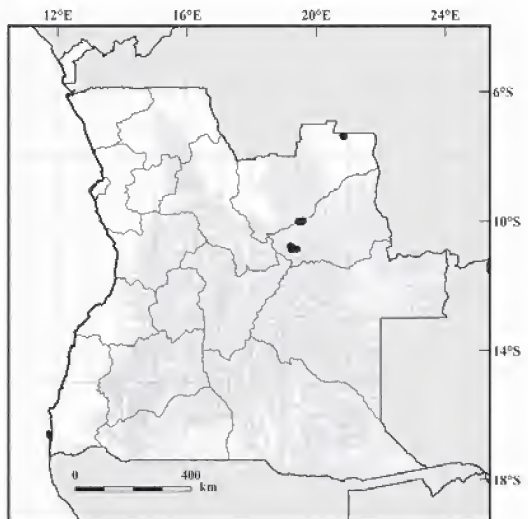
Schoutedenella lameerei: Laurent (1954a:75, 1964a:146), Frade (1963:254), Cei (1977:16), Frost (1985:19), Channing (2011:50).

Arthroleptis lameerei: Ruas (1996:28), Frétey et al. (2011:24), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from northern Angola, the southern Democratic Republic of Congo, and likely occurs in multiple places in the Albertine Rift Mountains.

Ocurrences in Angola (Map 63): The species occurs in northern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:75, 1964a:146; Ruas 1996:28); “Dundo, galerie forestière de la Luachimo” [-7.38333, 20.85000] (Laurent 1954a:75). **Lunda Sul:** “Alto Cuílo, Poste de Cacolo, ruisseau-cascade Ná-Ipanha” [-10.00000, 19.58333] (Laurent 1964a:146; Ruas 1996:28); “Alto Cuílo, Poste de Cacolo, rives du lac Caviuimba” [-10.01667, 19.55000] (Laurent



MAP 63. Distribution of *Arthroleptis lameerei* in Angola.

1964a:145); “Alto Cuílo, Poste de Cacolo, galerie forestière du Tchá-Muchito, sous-affluent du Cuílo” [-10.01667, 19.45000] (Laurent 1964a:145); “Alto Chicapa, galerie forestière de la Ngun-go, sous-affluent du Cuango-Muqué (Rio Gungo)” [-10.83333, 19.28333] (Laurent 1964a:145; Ruas 1996:28); “Alto Chicapa, Tshimboma, affl. rive gauche du Cuango-Muqué” [-10.76667, 19.20000] (Laurent 1964a:145; Ruas 1996:28); “Alto Cuílo, rives du Cuílo (Rio Cuílo)” [-10.86667, 19.40000] (Laurent 1964a:145; Ruas 1996:28); “Alto Chicapa, Cascade de la Kamutolonga (Rio Camuntongola)” [-10.88333, 19.25000] (Laurent 1964a:145; Ruas 1996:28); “Alto Chicapa, sources de la Tshimboma, affl. rive gauche du Cuango-Muqué (Rio Chimboma)” [-10.88333, 19.23333] (Laurent 1964a:146; Ruas 1996:28). **Undetermined Locality:** without precise locality (Laurent 1964a:146), “areas of forest and savanna in the north and northeast of Angola (Cei 1977:16).

Taxonomic and distributional notes: Channing (2001) provided two unspecified localities for *A. lameerei* in northwestern Angola, and he noted that when collected in Angola this species was found in leaf litter.

Arthroleptis spinalis Boulenger, 1919

TANGANYIKA SCREECHING FROG

Arthroleptis spinalis Boulenger 1919b:187. Holotype: MRAC (collector Stappers), *fide* R. Laurent in Frost (1985:20). Type locality: “la plaine Saint-Louis, au Lake Tanganyika” (Boulenger 1919b:187), [= St. Louis Plain on the western shore of Lake Tanganyika] Democratic Republic of Congo.

Athroleptis boulengeri: Laurent (1950a:15).

Schoutedenella spinalis: Cei (1977:16).

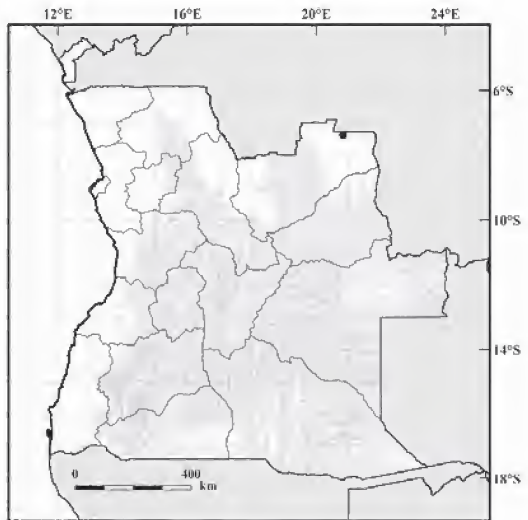
Arthroleptis spinalis: Frétey et al. (2011:22), Frost (2016).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known from northern Angola and the eastern Democratic Republic of Congo.

Ocurrences in Angola (Map 64): The species has one record in the northeast of the country. **Lunda Norte:** “Dundo, galerie forestière de la Luachimo” [-7.38333, 20.83333] (Laurent 1950a:15).

Taxonomic and distributional notes: Boulenger (1919a) described *Arthroleptis spinalis* from eastern Democratic Republic of Congo, which is generally recognized as the only known locality for this species (Frétey et al. 2011, Frost 2016). However, Laurent (1950a) cited *Arthroleptis boulengeri* (de Witte, 1921) from northeastern Angola and then later recognized this species as a junior synonym of *A. spinalis* (Laurent 1954). If correct, this suggests that this species may be more widespread throughout northern Angola and southern Democratic Republic of Congo.



MAP 64. Distribution of *Arthroleptis spinalis* in Angola.

Arthroleptis stenodactylus* Pfeffer, 1893*COMMON SQUEAKER**

Arthroleptis stenodactylus Pfeffer 1893:93, pl. 1, fig. 11. Holotype: ZMH, presumably destroyed in World War II (collector F. Stuhlmann). Type locality: “Kihengo” (Pfeffer 1893: pl. I), Tanzania.

Corachodichus stenodactylus: Frade (1963:254), Cei (1977:16).

Corachodichus stenodactylus stenodactylus: Laurent (1964a:144).

Arthroleptis stenodactylus: Ruas (1996:28, 2002:145), Channing (2001:46), Frétey et al. (2011:25), Frost (2016).

Global conservation status (IUCN): Least Concern.

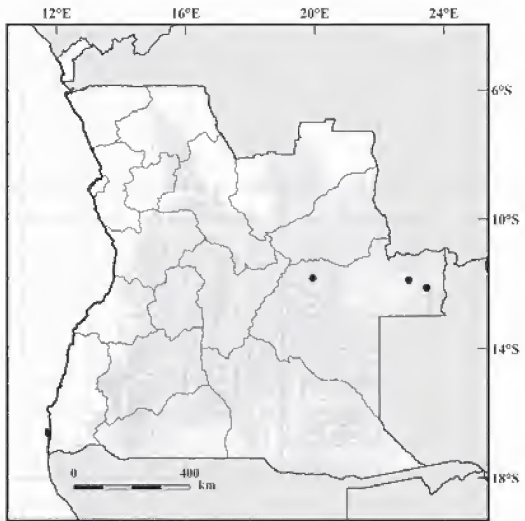
Global distribution: The species is broadly distributed from Kenya and Tanzania, west into the Democratic Republic of Congo and Angola, and south through Zambia, Zimbabwe, Malawi, Mozambique, and extreme northeastern South Africa.

Occurrences in Angola (Map 65): The species is known only for Moxico Province.

Moxico: “Calombe, Luso” [-11.83333, 19.93333] (Ruas 1996:28, 2002:145; Channing 2001:47); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:144; Ruas 1996:28; Channing 2001:47); “Calunda, Alto Zambeze” [-12.11667, 23.46667] (Laurent 1964a:144; Ruas 1996:28; Channing 2001:47). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16); “Zambezean highlands” (Frade 1963:254).

Taxonomic and distributional notes:

According to Ruas (1996), *Arthroleptis stenodactylus* Pfeffer, 1893 in Angola occurs only in the east of the country. Previous authors (e.g., Channing and Howell 2006; Pickersgill 2007a) have suggested that multiple distinct species exist within what is referred to *A. stenodactylus*, and preliminary molecular genetic data provides some support for this (Blackburn 2008). It is not yet clear to which of these cryptic species these Angolan populations might correspond.



MAP 65. Distribution of *Arthroleptis stenodactylus* in Angola.

Arthroleptis xenochirus* Boulenger, 1905*PLAIN SQUEAKER**

Arthroleptis xenochirus Boulenger 1905:108, pl. 4, figs. 2, 2a. Holotype: BMNH 1947.2.30.54 (collector W.J. Ansorge), formerly 1904.5.2.101, *fide* R. Laurent in Frost (1985:20). Type locality: “Marimba” (Boulenger 1905:109), Angola.

Schoutedenella xenochira: Laurent (1954c:36).

Schoutedenella xenochirus: Cei (1977:16), Laurent (1964a:145), Frost (1985:20), Channing (2001:52).

Arthroleptis xenochirus: Laurent (1950a:15), Frade (1963:254), Ruas (1996:28, 2002:145), Frétey et al. (2011:25), Frost (2016), Ceriaco et al. (2016b:23).

Global conservation status (IUCN): Least Concern.

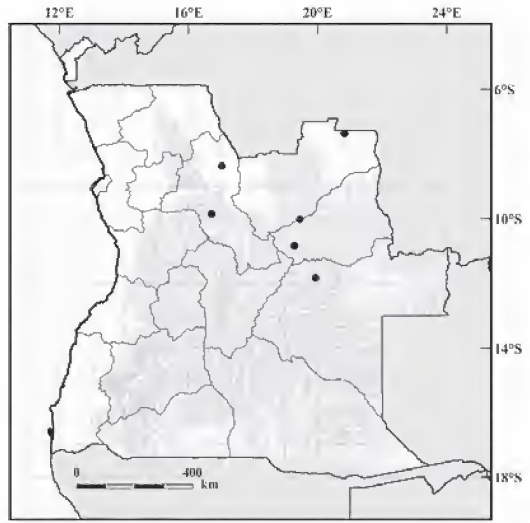
Global distribution: A wide-ranging species found in northern Angola, the southern Democratic Republic of Congo, northern Zambia and possibly southwesternmost Tanzania.

Occurrences in Angola (Map 66): The species occurs in northeastern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950:15). **Lunda Sul:** “Poste de Cacolo, Alto Cuílo, gale-

rie forestière du Tchá-Muchito, sous affluent du Cuílo” [-10.01667, 19.45000] (Laurent 1964a:145); “Alto Chicapa, galerie forestière de la Ngungo, sous-affluent du Kwango-Muqué” [-10.83333, 19.28333] (Laurent 1964a:145). **Malanje:** “Marimba” [-8.36667, 17.03333] (Boulenger 1905:108; Laurent 1954c:36; Frost 1985:20, 2016); “Cangandala National Park” [-9.84606, 16.72233] (Ceríaco et al. 2016b:23). **Moxico:** “Calombe, Luso” [-11.83333, 19.93333] (Ruas 2002:145). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Ceí 1977:16).

Taxonomic and distributional notes:

This species is well documented from north-eastern Angola. Given past taxonomic uncertainties (e.g., Laurent 1964a; Poyton and Broadley 1985a), it is possible that what is referred to as *A. xenochirus* across its currently recognized range may in fact represent more than one species.



MAP 66. Distribution of *Arthroleptis xenochirus* in Angola.

Genus *Leptopelis* Günther, 1859

***Leptopelis anchietae* (Bocage, 1873)**

ANCHIETA’S TREEFROG (Endemic)

Hylambates anchietae Bocage 1873b:226. Holotype: MBL T.13-233 (Perret 1976a:22-23) (collector J.A. Anchieta), destroyed 18 March 1978. Type locality: “l’intérieur de Mossamedes” (Bocage 1873b:226), [= Namibe] Angola, later corrected to “Huíla” and “Caconda,” Huíla Province by Perret (1976a:22).

Hylambates anchietae: Bocage (1895a:177, 1897a:205), Boulenger (1882:133, 1905:110).

Leptopelis anchietae: Schmidt (1936:131), Monard (1938:84), Loveridge (1957:317), Frade (1963:254), Laurent (1964a:147), Perret (1976a:22), Ceí (1977:17), Frost (1985:227, 2016), Schiøtz (1999:306), Channing (2001:196), Channing et al. (2012:106), Frétey et al. (2011:35).

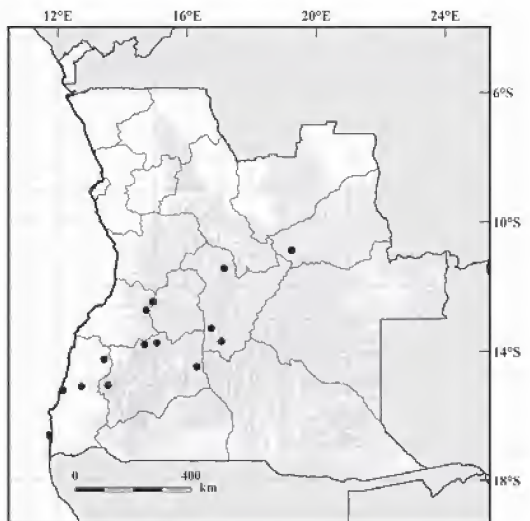
Leptopelis cf. *anchietae*: Conradie et al. (2016:10).

Global conservation status (IUCN):

Least Concern.

Global distribution: The species is known only from Angola.

Ocurrences in Angola (Map 67): The species is known from the type locality “Huíla” and from scattered localities throughout much of the western half of Angola. **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:147). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1936:131); “Cubango basin (11)” [-13.69413, 17.06177] (Conradie et al. 2016:8-9, 10); “Cubango basin (13)”



MAP 67. Distribution of *Leptopelis anchietae* in Angola.

[-13.28061, 16.74722] (Conradie et al. 2016:8-9, 10). **Benguela:** “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:177, 1897a:205); “Ebanga” [-12.73333, 14.73333] (Monard 1938:84); “Mount Chininga regions, between 1200 and 1700m” (Channing 2001:196). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1897a:205; Perret 1976a:12); “Kalukembé” [-13.78333, 14.68333] (Monard 1938:84); “near Humpata” [-14.23814, 13.43331] Channing et al. (2012:106); “Kuvangu” [-14.46667, 16.30000] (Monard 1938:84); “Huila” [-15.05000, 13.55000] (Bocage 1895a:177, 1897a:205; Perret 1976a:22). **Namibe:** “l’interieur de Mossamedes (Mossamedes)” [-15.20000, 12.15000] (Bocage 1873b:226; Boulenger 1882:133; Loveridge 1957:317); “Chiyaka district” [vic. -15.08333, 12.73333] (Perret 1976:22). **Undetermined Locality:** “Western subregion and Angolan highlands (Angola coastal or watersheds)” (Frade 1963:254); “areas of forest and savanna in the north and notheast of Angola” (Ceil 1977:17).

Taxonomic and distributional notes: Perret (1976a) suggested that *Leptopelis anchietae* (Bocage, 1873) is closely related to *Leptopelis nordequatorialis* Perret, 1966 and *L. oryi* Inger, 1968.

Leptopelis aubryi (Duméril, 1856)

GABON FOREST TREEFROG

Hyla Aubryi Duméril 1856:561. Syntypes: MNHN 833, 1571 and 4603 (collector J. Aubry-Lecomte). Type locality: “Gabon.”

Hylambates Aubryi: Peters (1877a:618), Bocage (1895a:181).

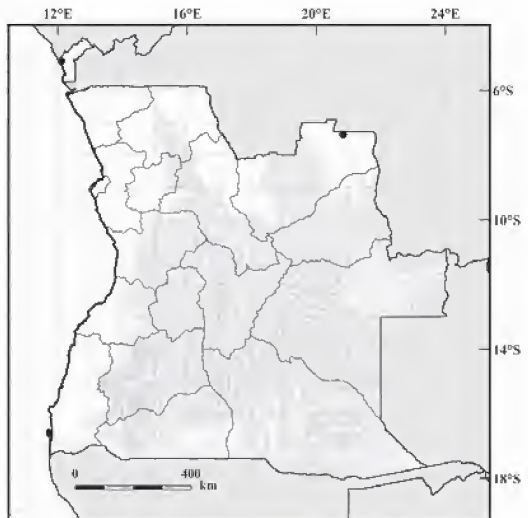
Leptopelis aubryi: Laurent (1954a:75), Loveridge (1957:318), Ceil (1977:17), Schiøtz (1999:266), Frétey et al. (2011:35), Channing et al. (2012:107), Forst (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: A forest-associated species distributed broadly in Central Africa, extending from southeastern Nigeria through Cameroon and Gabon, east into the Central African Republic, and south through the Democratic Republic of Congo to northern Angola.

Occurrences in Angola (Map 68): The species occurs in the Cabinda enclave and in the extreme northeast of Lunda Norte Province. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:618; Bocage 1895a:176); “cotê de Loango” (Bocage 1895a:181); “Cabinda enclave” (Channing et al. 2012:107). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:75).

Taxonomic and distributional notes: Many species of *Leptopelis* in Central Africa have been confused with *Leptopelis aubryi*, which has a broad distribution and occurs both within forests and along the margins of forests.



MAP 68. Distribution of *Leptopelis aubryi* in Angola.

Leptopelis bocagii (Günther, 1865)

BOCAGE'S TREEFROG

Cystignathus Bocagii Günther 1865a:481, pl. 33, fig. 2. Holotype: not stated, destroyed by fire 18 March 1978 (collector F.P. Bayão). Two specimens received by BMNH from MBL may be types *fide* Frost (2016). Type locality: “Duque de Bragança” (Günther 1865a:482), [= Calandula], Malanje Province, Angola;

Hylambates angolensis Bocage 1893:119. Syntypes: MBL T.14-242-244 [3 specimens] (collector J.A.

d'Anchieta), destroyed by fire 18 March 1978. Type locality: “Cahata” [= Caota], “Quindumbo”, “Quissange”, Benguela Province and “Caconda” Huíla Province, Angola.

Hylambates bocagei var. *leucopunctata* Ferreira 1904:113. Syntype: MHNFCP 017324 (collected by F. Newton). Type locality: “Gumba” (Ferreira 1904:113), [= Gumba, Serra de Selles] Kwanza Norte Province, Angola.

Cystignathus Bocagei: Bocage (1866a:54).

Hylambates bocagei: Boulenger (1882:133), Bocage (1895a:176, 1897a:205).

Hylambates angolensis: Bocage (1895a:179, 1896a:113, 1897a:205, 1897b:211), Perret (1976a:23).

Hylambates bocagei var. *leucopunctata*: Ferreira (1904:113).

Hylambates bocagei: Ferreira (1906:164).

Leptopelis angolensis: Schmidt (1936:131), Monard (1938:84), Frade (1963:254).

Leptopelis bocagei: Loveridge (1933:393, 1953a:342, 1957:317), Laurent (1950a:15, 1954a:76), Hellmich (1957a:30), Inger (1959:539, 541), Cei (1977:17), Schiøtz (1975:14), Frost (1985:228, 2016), Poynton and Broadley (1987:174), Schiøtz (1999:289), Channing (2001:198), Largen (1977:96, 2001:349), Frétey et al. (2011:36), Ceriaco et al. (2014a:25), Ceriaco et al. (2016b:25).

Leptopelis parvocagei: Poynton and Broadley (1987:171), Schiøtz and Van Daele (2003:146).

Leptopelis cf. *bocagei*: Amiet (2012:466).

Global conservation status (IUCN): Least Concern.

Global distribution: This savanna species has a broad distribution extending from Ethiopia in the north, south to Angola, northeastern Namibia, Zambia, Zimbabwe, and Mozambique.

Occurrences in Angola (Map 69): The

species occurs from the western regions to northeastern Angola. **Lunda Norte:** “Dundo”

[-7.36667, 20.83333] (Laurent 1954a:76; Ceriaco et al. 2014a:26); “Muita (Luembe E)”

[-7.80000, 21.45000] (Laurent 1950a:15, 1954a:76; Ceriaco et al. 2014a:26). **Kwanza**

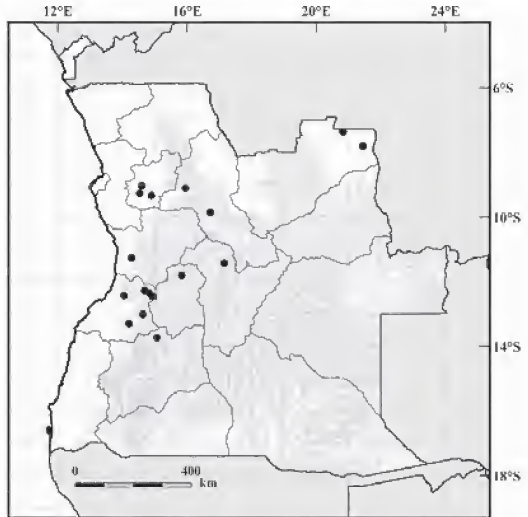
Norte: “N’Golla Bumba” [-9.03333, 14.60000] (Ferreira 1906:164; Ceriaco et al. 2014a:26); “Rio Luinha” [-9.26667, 14.53333]

(Ferreira 1906:164; Ceriaco et al. 2014a:26); “Quilombo” [-9.33333, 14.90000] (Ferreira 1906:164; Ceriaco et al. 2014a:26). **Kwanza**

Sul: “Gumba” [-11.26667, 14.28333] (Ferreira 1904:113; Loveridge 1957:317; Ceriaco et al. 2014a:25). **Malanje:** “Duque de Bragança

(Duque de Brangança)” [-9.10000, 15.95000] (Günther 1865a:482; Bocage 1866a:54,

1895a:176, 1897a:205; Loveridge 1933:393, 1953a:342, 1957:317; Schiøtz 1975:14; Perret 1976a:23; Frost 1985:228, 2016; Poynton and Broadley 1987:174; Largen 2001:349; Ceriaco et al. 2014a:27), “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:25). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1936:131). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1938:84). **Benguela:** “Quibula” [-12.28333, 14.68333] (Bocage 1893:119, 1895a:179, 1897a:205); “Cahata” [-12.35000, 14.81667] (Bocage 1893:119, 1895a:179, 1897a:205; Perret 1976a:23); “Quissange” [-12.43333, 14.05000] (Bocage 1893:119, 1895a:179, 1897a:205; Loveridge 1933:393; Perret 1976a:23); “Quindumbo” [-12.46667, 14.93333] (Bocage 1893:119, 1895a:179, 1897a:205; Perret 1976a:23); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:30); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:113; 1897b:211). **Huíla:** “Caconda”



MAP 69. Distribution of *Leptopelis bocagei* in Angola.

[-13.73333, 15.06667] (Bocage 1893:133, 1895a:179, 1897a:205; Loveridge 1957:317; Perret 1976a:23).

Taxonomic and distributional notes: Perret (1976a) noted that the synonymy of *L. angolensis* with *L. bocagei* was difficult to evaluate due to the differences in maturity between the type specimens of these two species, which were lost in the 1978 fire in Museu Bocage. Poynton and Broadley (1987) described a similar species, *Leptopelis parvocagii* based on five specimens collected at Mabwe on the eastern shore of Lake Upemba, in what is now the Democratic Republic of Congo. Because of their morphological similarity and overlapping distributions, the identification of these two species remains difficult (Schjötz 1999; Schjötz and Van Daele, 2003). *Leptopelis bocagii* is a widespread species in southern and central Africa (Channing 2001), though it may comprise several cryptic species (Largen 1977; Amiet 2012). Ferreira (1904) described the variety *leucopunctata*, currently considered a synonym of *Leptopelis bocagii* (Günther, 1865). Ceríaco et al. (2014a) provided more details about the taxonomic identity and nomenclature of *L. bocagii* and located a syntype from “Gumba, Sa [Serra] de Selles = Angola,” collected by Francisco Newton during the 1903–1905 expedition in Angola, in the Museu de História Natural da Universidade do Porto, Portugal.

Leptopelis cynamomeus (Bocage, 1893)

ANGOLA FOREST TREEFROG

Hylambates cynamomeus Bocage 1893:120. Holotype: MBL T.16-250 (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Quillengues,” Huíla Province, Angola.

Hylambates cynamomeus: Bocage (1895a:180, 1897a:205).

Leptopelis viridis cynamomeus: Laurent (1964a:148), Cei (1977:17).

Leptopelis cynamomeus: Schjötz (1975:24), Frost (1985:229, 2016), Poynton and Broadley (1987:177), Schjötz (1999:299), Channing (2001:200), Schjötz and Van Daele (2003:146), Frétey et al. (2011:36).

Leptopelis bocagii: Loveridge (1957:317).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from central Angola, northwestern Zambia, and southern Democratic Republic of Congo.

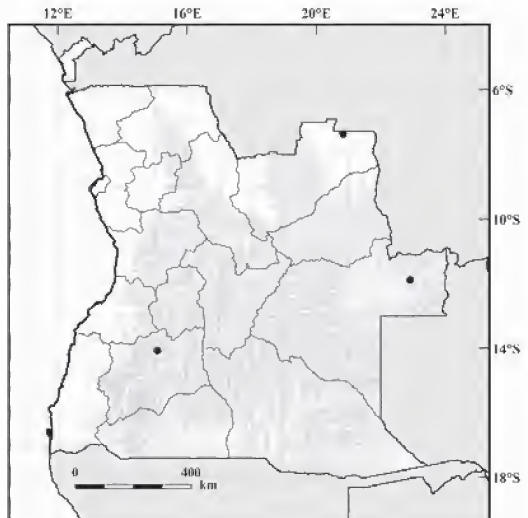
Occurrences in Angola (Map 70): The species is known from the type locality “Quillengues” in Huíla, as well as from central and northeastern Angola, next to the boundary with the Democratic Republic of Congo and Zambia.

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1964a:148; Channing 2001:201).

Moxico: “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:148; Channing 2001:201).

Huíla: “Quillengues” [-14.06667, 15.08333] (Bocage 1893:120, 1895a:180, 1897a:205; Loveridge 1957:317; Schjötz 1975:24; Perret 1976a:22; Frost 1985:229, 2016; Channing 2001:201).

Taxonomic and distributional notes: Perret (1976a) examined the holotype from Angola in the collection of Museu Bocage and considered two paratypes from “Boloma” in Guinée-Bissau to represent *Leptopelis viridis* (Günther, “1868” 1869).



MAP 70. Distribution of *Leptopelis cynamomeus* in Angola.

Leptopelis jordani* Parker, 1936*CONGULU FOREST TREEFROG (Endemic)**

Leptopelis jordani Parker 1936:144. Holotype: BMNH 1947.2.19.95 [formerly BMNH 1936.8.1.226] (collector K. Jordan). Type locality: “Congulu (700-800m)” [= Congulo] Kwanza Sul Province, Angola.

Leptopelis jordani Parker, 1936: Frost (1985:230, 2016), Frétey et al. (2011:36).

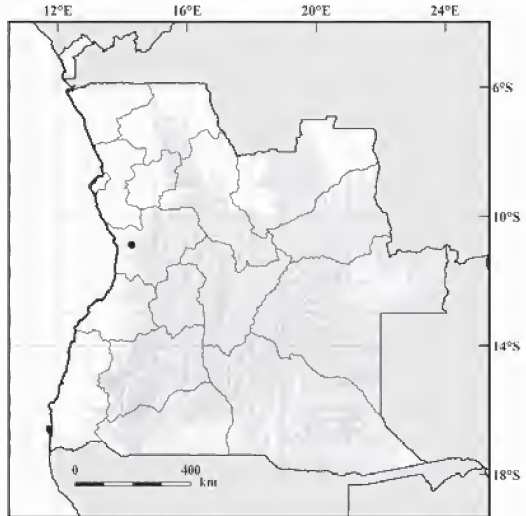
Global conservation status (IUCN):

Data Deficient.

Global distribution: This species is known only from Angola.

Ocurrences in Angola (Map 71): The species is known only from the type locality “Congulu” in western Angola. **Kwanza Sul:** “Congulu (700-800m)” [-10.86667, 14.28333] (Parker 1936:144; Frost 1985:230, 2016).

Taxonomic and distributional notes: In his description, Parker (1936) noted similarities to the widespread *Leptopelis aubryi* (Duméril, 1856). There have been no recent records since the original description and the validity of this taxon remains in question. This species is not mentioned in Schiøtz (1999) or Channing (2001).



MAP 71. Distribution of *Leptopelis jordani* in Angola.

Leptopelis marginatus* (Bocage, 1895)*QUISSANGUE FOREST TREEFROG (Endemic)**

Hylambates marginatus Bocage 1895a:178. Holotype: MBL T.218-241 (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Quissange, dans l’intérieur de Benguela” [= Quissange] Benguela Province, Angola.

Hylambates marginatus: Bocage (1897a:205), Cei (1977:17).

Leptopelis bocagii: Loveridge (1933:393).

Leptopelis anchietae: Loveridge (1957:317).

Leptopelis marginatus: Perret (1976a:23), Forst (1985:230, 2016), Frétey et al. (2011:36).

Global conservation status (IUCN):

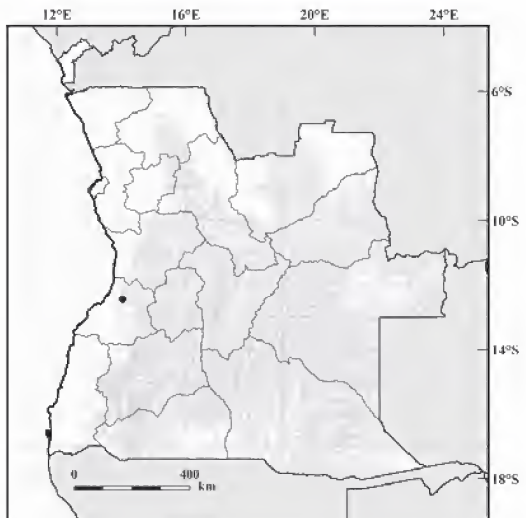
Data Deficient.

Global distribution: This species is known only from Angola.

Ocurrences in Angola (Map 72): The species is known only from the type locality in eastern Angola. **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:179, 1897a:205; Loveridge 1933:393, 1957:317; Perret 1976a:23, Frost 1985:230, 2016).

Taxonomic and distributional notes:

Perret (1976a) concluded that *L. marginatus* was a valid species, in contrast to Loveridge (1933) who recognized it as a synonym of *Leptopelis bocagii* (Günther, 1865). There have been no other recent records and the holotype



MAP 72. Distribution of *Leptopelis marginatus* in Angola.

was destroyed in the 1978 fire in Museu Bocage. This species is not mentioned Schiøtz (1999) or Channing (2001). This should be recognized as a *nomen dubium*.

***Leptopelis notatus* (Peters, 1875)**

COMMON FOREST TREEFROG

Hylambates notatus Peters 1875:205, pl. 2, figs. 1, 1a. Holotype: ZMB 8471 (collector R. Buchholz) *fide* Bauer et al. (1995:43). Type locality: “Cameruns” (Peters 1875:206), [= Cameroon].

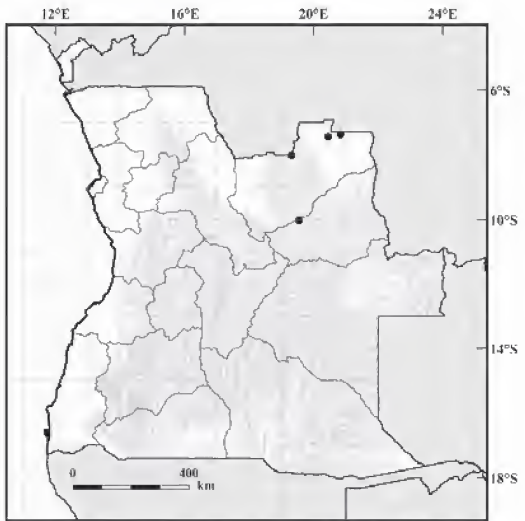
Leptopelis tessmanni: Laurent (1950a:15), Frade (1963:254).

Leptopelis notatus: Laurent (1964a:147), Cei (1977:17), Schiøtz (1999:264), Frétey et al. (2011:36), Channing et al. (2012:116), IUCN SSC Amphibian Specialist Group (2013a), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: This is a widespread species occurring in and near forests extending from Cameroon, Gabon, Republic of Congo, the western Democratic Republic of Congo, and into northernmost Angola.

Occurrences in Angola (Map 73): The species occurs in the northern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:147); “Mussalomuca” [-7.43333, 20.45000] (Laurent 1964a:147); “rive de la Tchihumbwe, 40 km à l’est de Dundo” [-8.01667, 19.31667] (Laurent 1950a:15). **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:147). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:17).



MAP 73. Distribution of *Leptopelis notatus* in Angola.

Taxonomic and distributional notes:

Frétey et al. (2011) questioned the presence of this species in Angola.

***Leptopelis viridis* (Günther, “1868” 1869)**

RUSTY FOREST TREEFROG

Hylambates viridis Günther “1868” 1869:487. Holotype: BMNH 1947.2.10.23 (purchased from Mr. Stevens), formerly BMNH 65.5.3.63. Type locality: “West Africa”.

Hylambates viridis: Bocage (1873b:226, 1895a:176, 1897a:205), Boulenger (1882:134).

Leptopelis viridis: Frétey et al. (2011:37), IUCN SSC Amphibian Specialist Group (2013b), Frost (2016).

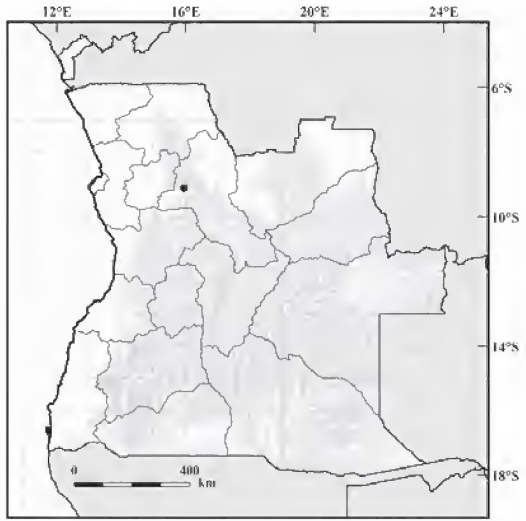
Global conservation status (IUCN): Least Concern.

Global distribution: This species is found in savannas across western and Central Africa, extending south into Angola.

Occurrences in Angola (Map 74): The species has been recorded from Malanje Province. **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1873b:206, 1895a:179, 1897a:205).

Taxonomic and distributional notes: Bocage (1873b, 1895a, 1897a) cited a single juvenile from “Duque de Bragança” collected by Bayão whereas Boulenger (1882) cited another individual from Angola collected by J.J. Monteiro, although without locality. Many recent summaries of the distribution of this species, including Schiøtz (1999), IUCN SSC Amphibian Specialist Group (2013b), and Frost (2016), have excluded Angola from its distribution though Frétey et al. (2011)

considered that it was present. Due to the lack of recent data and the limited information supplied by previous authors for Angolan specimens, the presence of *L. viridis* in Angola is questionable.



MAP 74. Distribution of *Leptopelis viridis* in Angola.

Genus *Trichobatrachus* Boulenger, 1900

Trichobatrachus robustus Boulenger, 1900

HAIRY FROG

Trichobatrachus robustus Boulenger 1900:443, pl. 30. Syntypes: BMNH 1947.2.30.85–86 (collector G.L. Bates), formerly BMNH 1900.2.17.59–60. Type locality: “Benito River, Gaboon” (Boulenger 1900:443), Equatorial Guinea.

Trichobatrachus robustus: Amiet and Burger (2004), Frost (2016).

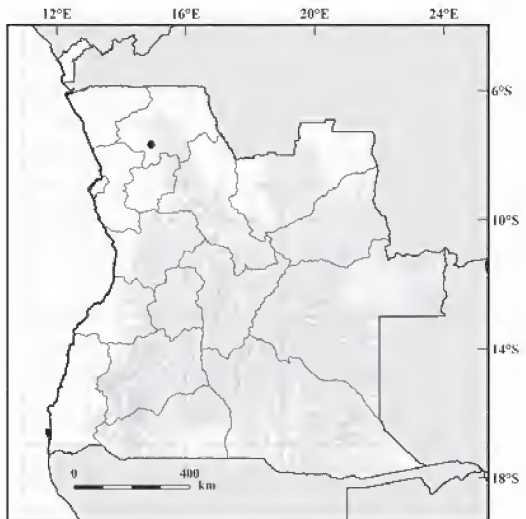
Trichobatrachus cf. *robustus*: Ernst et al. (2014:298, 299).

Global conservation status (IUCN): Least Concern.

Global distribution: This forest species occurs throughout the Atlantic Coastal Forests, extending from Nigeria and Cameroon south into northern Angola.

Ocurrences in Angola (Map 75): This species was only recently reported from Uíge Province in the north of the country. **Uíge:** “Serra Pingano (along Mbalage creek)” [−7.66814, 14.93519] (Enst et al. 2014:289); “Serra Pingano, approximately 40 m away from Mbalage creek” [−7.68467, 14.93242] (Enst et al. 2014:289); “Mbalage creek, Serra Pingano” [−7.68514, 14.92944] (Enst et al. 2014:289).

Taxonomic and distributional notes: Ernst et al. (2014) discovered a distinct lineage of *Trichobatrachus* in “Serra do Uíge,” an isolated forest remnant in northern Angola. Further studies are needed to clarify whether this population is conspecific with those from farther north in Cameroon and Gabon (Ernst et al., 2014). There remains little information



MAP 75. Distribution of *Trichobatrachus robustus* in Angola.

available on the habitat requirements and natural history of this charismatic species (Amiet and Burger 2004; Ernst et al. 2014).

Family Ptychadenidae Dubois, 1987

Genus *Hildebrandtia* Nieden, 1907

Hildebrandtia ornatissima (Bocage, 1879)

ANGOLA ORNATE FROG (Endemic)

Rana ornatissima Bocage 1879a:98. Holotype: MBL T.78-160 (collectors H.C. Capello and R. Ivens), destroyed by fire 18 March 1978. Type locality: “Bihé” [= Bié] Bié Province, Angola.

Hildebrandtia angolensis Nieden 1908:657. Holotype: ZMB 20024 ? (Gleim). Type locality: “Loanda in Angola” (Nieden 1908:657), [= Luanda], Luanda Province, Angola.

Rana ornatissima: Bocage (1879c:89, 1895a:157, 1897a:202), Boulenger (1905:107, 1919a:35), Schmidt and Inger (1959:38), Frade (1963:254).

Rana (Hildebrandtia) ornatissima: Monard (1938:105).

Rana (Hildebrandtia) myotympanum: Monard (1937a:49, 1938:106).

Rana ornata ornatissima: Schmidt and Inger (1959:40).

Hildebrandtia myotympanum: Cei (1977:16, 17).

Hildebrandtia ornatissima: Perret (1976a:19), Cei (1977:16, 17).

Hildebrandtia ornata ornatissima: Ruas (1996:24).

Hildebrandtia ornata: Channing (2001:294).

Hildebrandtia ornatissima: Frost (1985:460, 2016); Frétey et al. (2011:40).

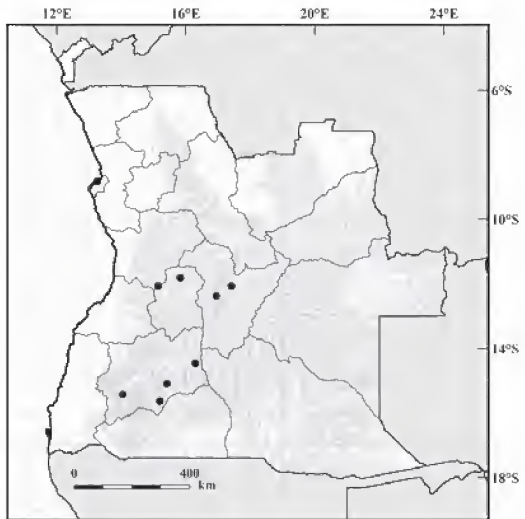
Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 76): This species is distributed in south-central Angola.

Luanda: “Loanda” [-8.83333, 13.26667] (Nieden 1908:657). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1938:105; Ruas 1996:24); “Galanga” [-12.06667, 15.15000] (Bocage 1895a:157, 1897a:202; Perret 1976a:19; Ruas 1996:24). **Bié:** “Bihé” [-12.38333, 16.95000] (Bocage 1879a:98, 1879c:89, 1897a:202; Boulenger 1919a:35; Perret 1976a:19; Ruas 1996:24; Frost 1985:460, 2016); “Bingondo” [-12.06667, 17.41667] (Boulenger 1905:107; Ruas 1996:24). **Huíla:** “Kuvangu” [-14.46667, 16.30000] (Monard 1937a:49, 1938:106; Ruas 1996:24); “Osi” [-15.08333, 15.41667] (Monard 1937a:49, 1938:106; Ruas 1996:24); “Dongue” [-15.43333, 14.05000] (Poynton and Haacke 1993:14; Ruas 1996:24); “Molundo” [-15.63333, 15.20000] (Monard 1937a:49, 1938:106; Ruas 1996:24). **Undetermined Locality:** “Konodoto” (Boulenger 1919a:35); “Cafita swamp” (Boulenger 1919a:35).

Taxonomic and distributional notes: The putative holotype of *Hildebrandtia angolensis* Nieden, 1908 is not marked as such in the ZMB catalogue, but it appears to be the only candidate specimen in the Berlin collection that is consistent with the type locality of “Loanda.” See also taxonomic account for *Hildebrandtia ornata*.



MAP 76. Distribution of *Hildebrandtia ornatissima* in Angola.

Hildebrandtia ornata* (Peters, 1878)*ORNATE FROG**

Pyxicephalus ornatus Peters 1878:207, pl. 2, fig. 7. Holotype: ZMB 9297 (collector J.M. Hildebrandt) *fide* Bauer et al. (1995:49). Type locality: “Taita” (Peters 1878:207), [= Teita], Kenya.

Rana ornatissima: Boulenger (1919a:35).

Rana ornata: Inger (1959: 541).

Hildebrandtia ornata ornata: Poynton and Broadley (1985b:141), Poynton and Haacke (1993:14), Ruas (1996:24).

Hildebrandtia ornata: Channing (2001:294), Frétey et al. (2011:40).

Global conservation status (IUCN): Least Concern.

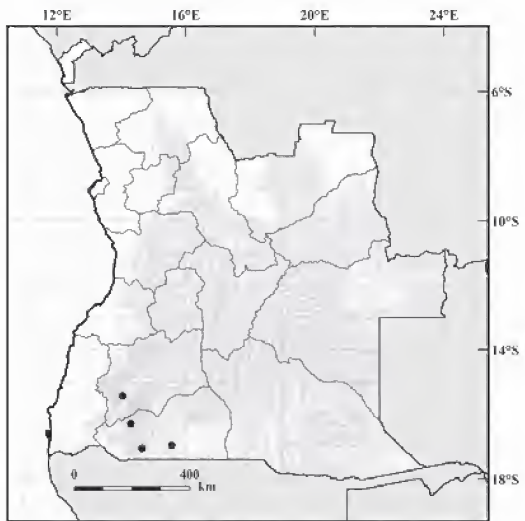
Global distribution: The species is broadly distributed in the savannas of sub-Saharan Africa, extending from the Sahel of West Africa, throughout eastern and south-central Africa, and into northeastern South Africa.

Ocurrences in Angola (Map 77): This species is distributed in south-central Angola.

Huíla: “Dongue” [-15.43333, 14.05000] (Poynton and Haacke 1993:14). **Cunene:** “2 km NW of Calequero” [-16.28333, 14.30000] (Poynton and Haacke 1993:14; Ruas 1996:24); “23 km NW of Pereira de Eça - Roçadas” [-16.95000, 15.56667] (Poynton and Haacke 1993:14; Ruas 1996:24); “Ponang Kuma” [-17.05000, 14.65000] (Boulenger 1919a:35).

Taxonomic and distributional notes:

Hildebrandtia ornatissima was described by Bocage (1879c) based on a single specimen from the type locality “Bihé.” Later, Nieden (1908) described *Hildebrandtia angolensis* from “Loanda” but this *nomen* was preoccupied by *Rana angolensis* Bocage, 1866. Boulenger (1919) proposed *Rana miotympanum* as a replacement name for *Hildebrandtia angolensis*, and Schmidt and Inger (1959) later recognized this as a junior synonym of *Rana ornata ornatissima* (Schmidt and Inger 1959). Perret (1976a) removed *H. ornatissima* from synonymy with *Hildebrandtia ornata* (Peters, 1878), though this has not been accepted by all subsequent authors and whether these represent one or two species remains unclear. Channing (2001) referred all specimens of *Hildebrandtia* from southern and central Africa, including from Angola, to *H. ornata*. In contrast, Poynton and Haacke (1993), Ruas (1996), and Frétey et al. (2011) recognized both *H. ornata* and *H. ornatissima* in Angola. The delimitation of these two species requires further review.



MAP 77. Distribution of *Hildebrandtia ornata* in Angola.

Genus *Ptychadena* Boulenger, 1917***Ptychadena anchietae* (Bocage, 1867)****ANCHIETA'S GRASS FROG**

Rana anchietae Bocage 1867a:843, fig. 1. Syntypes: MBL T.9.134 [3 specimens] (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: “Benguella” [= Benguela] Benugela Province Angola.

Rana anchietae: Peters (1877a:618).

Rana mascareniensis: Boulenger (1882:52), Bocage (1895a:160).

Rana oxyrhynchus oxyrhynchus: Loveridge (1957:340).

Ptychadena anchietae: Perret (1976a:19, 1979:18), Poynton and Broadley (1985b:146), Frost (1985:471, 2016), Poynton and Haacke (1993:14), Ruas (1996:25, 2002:144), Largen (2001:335), Channing

(2001:319), Channing et al. (2012:305), Ceriaco et al. (2016b:43).

Ptychadena (Ptychadena) anchietae: Frétey et al. (2011:41).

Global conservation status (IUCN): Least Concern.

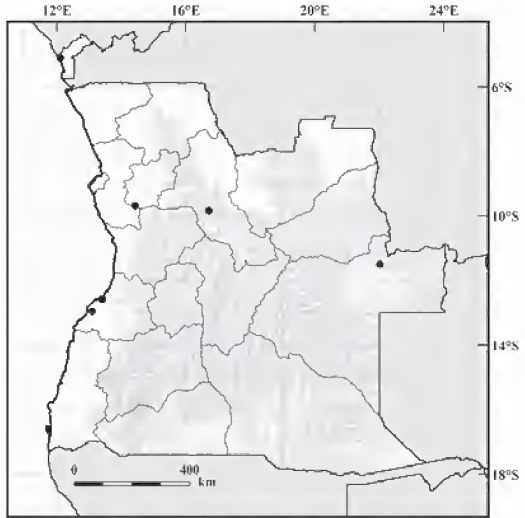
Global distribution: This broadly distributed species is known from Ethiopia south to Angola and southeast to South Africa.

Occurrences in Angola (Map 78): The species occurs in both western regions and eastern regions near the Zambian border.

Cabinda: “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:618). **Kwanza Norte:** “Dondo” [-9.68333, 14.43333] (Poynton and Haacke 1993:14). **Malanje:** “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:43). **Moxico:** “Diolo lake” [-11.50000, 22.01667] (Ruas 1996:25, 2002:144). **Benguela:** “Benguella” [-12.58333, 13.41667] (Bocage 1867a:843; Loveridge 1957:340; Perret 1976a:19; Poynton and Broadley 1985b:146; Frost 1985:471, 2016; Largen 2001:335); “Dombe” [-12.95000, 13.10000] (Bocage 1895a:160; Ruas 1996:25). **Undetermined Locality:** “savanna from Ethiopia to Natal, across to Angola” (Cei 1977:16).

Taxonomic and distributional notes:

Perret (1979) erroneously referred to “Huila” as the type locality. Bocage (1895a) and Boulenger (1882) considered *R. anchietae* to be a synonym of *Rana mascareniensis* (Duméril and Bibron, 1841). The latter species was also confused with *Rana oxyrhynchus* (Smith, 1849) because of its morphological similarity (Perret 1976a). Poynton (1964a) recognized *P. anchietae* as valid, but later (Poynton 1970) considered it to be a synonym of *P. superciliaris* (Günther, 1858). Perret (1976a), however, disagreed noting that *P. superciliaris* is a forest species distinct from *P. anchietae*, and this interpretation was followed by Poynton and Broadley (1985b).



MAP 78. Distribution of *Ptychadena anchietae* in Angola.

***Ptychadena ansorgii* (Boulenger, 1905)**

ANSORGE'S GRASS FROG

Rana Ansorgii Boulenger 1905:107, pl. 4, fig. 1. Holotype: BMNH 1947.2.29.48 (collector W.J. Ansorge).

Type locality: “Between Benguella and Bihé” [= between Benguela and Bié], Angola.

Rana ansorgii: Loveridge (1933:371, 1936a:95, 1936b:419, 1953a:373, 1957:343).

Rana (Ptychadena) ansorgii: Monard (1937a:52, 1938:110), Parker (1939:142).

Ptychadena ansorgei: Laurent (1950:14).

Rana ansorgei: Inger (1959:541), Schmidt and Inger (1959:61).

Ptychadena ansorgii: Cei (1977:16, 17).

Ptychadena ansorgii: Loveridge (1936a:95), Poynton and Broadley (1985b:152), Ruas (1996:26), Largen (2001:177), Channing (2001:321), Frost (1985:471, 2016).

Ptychadena (Ptychadena) ansorgii: Frétey et al. (2011:41).

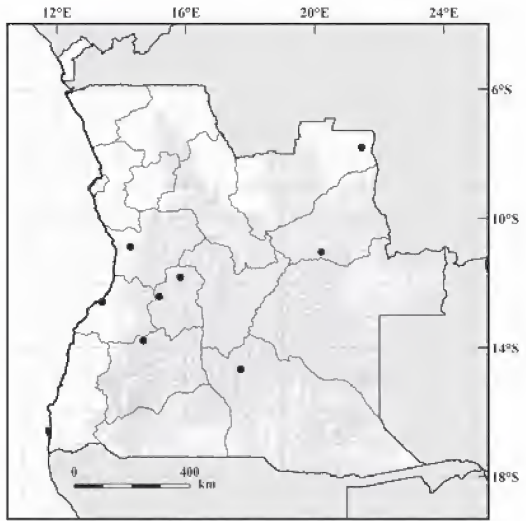
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola, southern Democratic Republic of Congo, northern Zambia, and Malawi.

Occurrences in Angola (Map 79): The species occurs in the extreme northeast and in the west-

ern regions of the country. **Lunda Norte:** “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:14; Ruas 1996:26). **Lunda Sul:** “Dala” [-11.03333, 20.20000] (Monard 1937a:52, 1938:110; Ruas 1996:26). **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:142; Ruas 1996:26). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937a:52, 1938:110; Ruas 1996:26); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:14; Ruas 1996:26). **Benguela:** “Benguela” [-12.58333, 13.41667] (Loveridge 1936a:95). **Huíla:** “Kalukembé” [-13.78333, 14.68333] (Monard 1937a:52, 1938:110; Ruas 1996:26). **Cuando Cubango:** “Kandingu (Kuluí)” [-14.66667, 17.70000] (Monard 1937a:52, 1938:110; Ruas 1996:26). **Undetermined Locality:** “Between Benguela and Bihé” (Boulenger 1905:107; Loveridge 1933:371, 1936b:419, 1953a:373, 1957:343; Schmidt and Inger 1959:61; Poynton and Broadley 1985b:152; Frost 1985:471, 2016; Ruas 1996:26), “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16); “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes: Relatively little is known of the biology of this species, which is found in the forests and savannas of south-central Africa.



MAP 79. Distribution of *Ptychadena ansorgii* in Angola.

Ptychadena bunoderma (Boulenger, 1907)

ROUGH GRASS FROG

Rana bunoderma Boulenger 1907a:214. Holotype: BMNH 1947.2.2.86 (collector W.J. Ansorge). Type locality: “Caconda,” Huíla Province, Angola.

Rana (Ptychadena) buneli: Monard (1937a:55, 1938:114). Syntypes: MNHNC [three specimens] (collector A. Monard). Type locality: “environs de Dala, sur le Tyiumbwé,” Lunda Sul Province, Angola.

Rana bunoderma: Schmidt (1936:129).

Ptychadena bunoderma: Laurent (1964a:142), Cei (1977:16), Poynton and Broadley (1985b:152), Frost (1985:471, 2016), Ruas (1996:26), Largen (2001:177), Channing (2001:324).

Ptychadena (Ptychadena) bunoderma: Frétey et al. (2011:41).

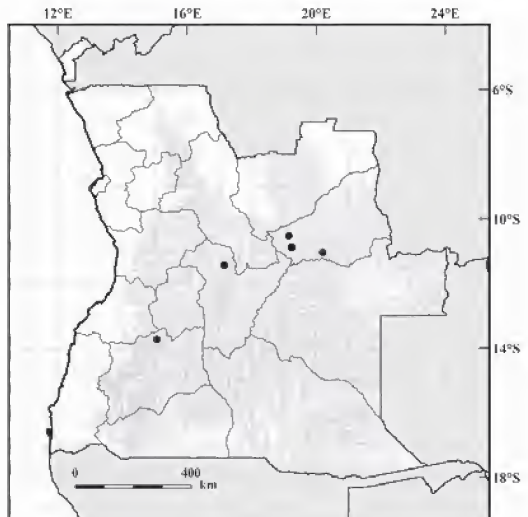
Global conservation status (IUCN):

Least Concern.

Global distribution: The species is known from Angola and northwestern Zambia.

Ocurrences in Angola (Map 80): The species occurs in central and eastern Angola.

Lunda Sul: “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:142; Ruas 1996:26); “Alto Chicapa, humidiherbosa des sources de la Kamassaka (Rio Camassaca)” [-10.88333,



MAP 80 Distribution of *Ptychadena bunoderma* in Angola.

19.25000] (Laurent 1964a:142; Ruas 1996:26); “Alto Chicapa, humidiherbosa des sources de la Kamutongola (Rio Camuntongola)” [-10.53000, 19.15000] (Laurent 1964a:142; Ruas 1996:26); “environs de Dala, sur le Tyiumbwé (Rio Chiumbe)” [-11.03333, 20.20000] (Monard 1937a:55, 1938:114; Ruas 1996:26). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1936:129; Ruas 1996:26). **Huíla:** “Caconda” [-13.73333, 15.06667] (Boulenger 1907a:214; Poynton and Broadley 1985b:152; Frost 1985:471, 2016; Ruas 1996:26). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16).

Taxonomic and distributional notes: Gaston de Witte initially identified Monard’s types of *R. buneli* as “*Rana* n. sp., voisine de *Rana mascareniensis* D.B.,” although based on Monard’s (1937a) description it is closer to *P. bibronii* or *P. bunoderma*. Laurent (1964a) provided some new records for *Ptychadena bunoderma* in Angola, including from near the type locality of *P. buneli* which he placed in the synonymy of *P. bunoderma*. Channing (2001) provided several records further north for the species without detailed information.

Ptychadena grandisonae Laurent, 1954

GRANDISON’S GRASS FROG

Ptychadena grandisonae Laurent 1954b:11, pl. 1, figs. 2, 5, pl. 3, figs. 1-2, pl. 4, figs. 1, 9. Holotype: presumably MD 506? (collector M. de Petchkowsky). Type locality: “Muita, Luembe E” [= Luembe] Lunda Norte, Angola.

Rana (Ptychadena) bibroni: Monard (1937a:51, 1938:109).

Ptychadena bibronii: Laurent (1950a:14).

Ptychadena grandisonae: Laurent (1964a:139), Cei (1977:16), Poynton and Broadley (1985b:150), Frost (1985:472, 2016), Poynton and Haacke (1993:14), Channing (2001:325). Ruas (2002:144).

Rana grandisonae: Schmidt and Inger (1959:70).

Ptychadena (Ptychadena) grandisonae: Frétey et al. (2011:41).

Ptychadena cf. *grandisonae*: Conradie et al. (2016:17).

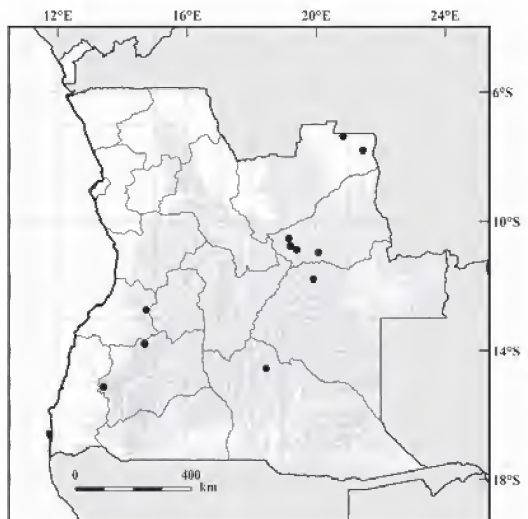
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from the Democratic Republic of Congo, Angola, and Zambia.

Ocurrences in Angola (Map 61): The species occurs in the northeast of the country, although there are some records further south.

Lunda Norte: “environs du Dundo” [-7.36667, 20.83333] (Laurent 1964a:139); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:14, 1954b:11; Schmidt and Inger 1959:70; Poynton and Broadley 1985b:150; Frost 1985:472, 2016). **Lunda Sul:** “Alto Chicapa, mare Tchá-Mutuka, près des sources du Cuango-Muqué” [-10.76667, 19.20000] (Laurent 1964a:139); “Alto Chicapa, sources du Cuílo” [-10.86667, 19.40000] (Laurent 1964a:139); “sources de la Kamutongola, Alto Chicapa” [-10.53000, 19.15000] (Laurent 1964a:139); “Lunda” [-10.96667, 20.06667] (Monard 1937a:51, 1938:109).

Moxico: “Luso” [-11.78333, 19.91667] (Ruas 2002:144). **Benguela:** “Ebanga” [-12.73333,



MAP 81. Distribution of *Ptychadena grandisonae* in Angola.

14.73333] (Monard 1937a:51, 1938:109). **Huíla**: “Kalukembé” [-13.78333, 14.68333] (Monard 1937a:51, 1938:109); “5 km W of Calucembe” [-13.80000, 14.68333] (Poynton and Haacke 1993:14); “Nuntechite lagoon” [-15.13333, 13.41667] (Poynton and Haacke 1993:14). **Cuando Cubango**: “on the edge of the upper Longa River floodplain (53b)” [-14.56322, 18.44394] (Conradie et al. 2016:9, 12, 17). **Undetermined Locality**: “areas of forest and savanna in the north and northeast of Angola” (Ceil 1977:16).

Taxonomic and distributional notes: Laurent (1954b) considered Monard’s usage of the name *Ptychadena bibroni* (*non* Hallowell) to refer to *Ptychadena grandisonae* Laurent, 1954. We agree with that conclusion and we also consider *Rana* (*Ptychadena*) *bibroni* (Monard 1937a, 1938) a synonym of *grandisonae*, since the distribution range for the real *Ptychadena bibroni* (Hallowell, 1845) is limited to the north of Gulf of Guinea, from the Gambia and Mauritania to the northeastern Democratic Republic of Congo and presumably to South Sudan (Frost, 2016).

Ptychadena guibei Laurent, 1954

GUIBE’S GRASS FROG

Ptychadena chrysogaster Laurent 1954b:18, pl. 2, fig. 2, pl. 1, fig. 3, pl. 3, figs. 5-6, pl. 4, figs. 3, 5. Holotype: MRAC 109096 *fide* Lang (1990:12). Type locality: “Lac Karago, Terr. de Kisenyi, Ruanda.”

Ptychadena chrysogaster guibei Laurent 1954b:23. Holotype: MD 2097 (collector M. de Petchkowsky). Type locality: “Muita, Luembe E” [= Luembe] Lunda Norte, Angola.

Ptychadena bibroni: Laurent (1950a:14).

Rana chrysogaster guibei: Schmidt and Inger (1959:65).

Ptychadena chrysogaster guibei: Laurent (1964a:136), Ceil (1977:16).

Ptychadena guibei: Poynton and Broadley (1985b:154), Ruas (1996:26), Largen (2001:177), Channing (2001:326), Frost (2016), Ceriaco et al. (2016b:47), Conradie et al. (2016:18).

Ptychadena chrysogaster: Frost (1985:471).

Ptychadena (*Ptychadena*) *guibei*: Frétey et al. (2011:41).

Ptychadena (*Ptychadena*) *chrysogaster*: Frétey et al. (2011:41).

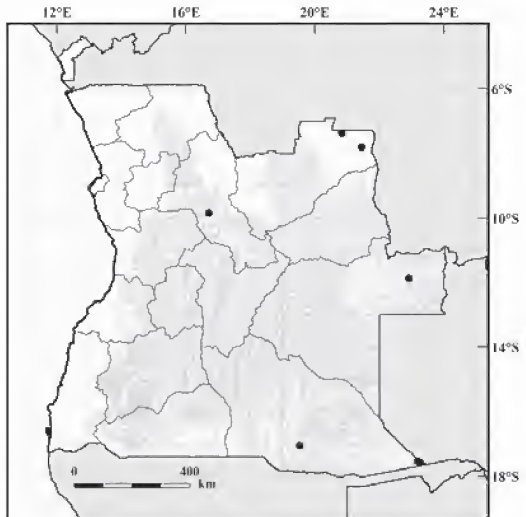
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from the Democratic Republic of Congo and eastern Angola, through Zambia, Botswana, Zimbabwe, Malawi, and northern Mozambique.

Occurrences in Angola (Map 82): The species occurs especially in eastern Angola. **Lunda Norte**: “Dundo” [-7.36667, 20.83333] (Laurent 1964a:136; Ruas 1996:26); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950:14, 1954b:23; Schmidt and Inger 1959:65; Poynton and Broadley 1985b:154; Ruas 1996:26).

Moxico: “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:136; Ruas 1996:26). **Malanje**: “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:47). **Cuando Cubango**: “Cuito basin (32)” [-17.04880, 19.53333] (Conradie et al. 2016:9-10, 18); “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10, 18); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10, 18).

Undetermined Locality: “areas of forest and savanna in the north and northeast of Angola” (Ceil 1977:16).



MAP 82. Distribution of *Ptychadena guibei* in Angola.

Taxonomic and distributional notes: Poynton and Broadley (1985b) elevated *P. guibei* to a full species. Frétey et al. (2011:41) cited *Ptychadena (Ptychadena) chrysogaster* Laurent, 1954 for Angola though we believe that this should be referred to *P. guibei* (Frost 2016). New material cited by Conradie et al. (2016) extends the species distribution into extreme southeastern Angola.

***Ptychadena keilingi* Monard, 1937**

KEILING'S GRASS FROG

Rana (Ptychadena) keilingi Monard 1937a:53, figs. 14–16. Syntypes: MNHC 90.0829 and 90.0830 (collector A. Monard). Type locality: “Dala,” Lunda Sul, Angola.

Rana (Ptychadena) keilingi: Monard (1938:112), Marx (1959:442), Laurent (1964a:141).

Ptychadena keilingi: Forcart (1946:126), Cei (1977:16), Poynton and Broadley (1985b:154), Frost (1985:472, 2016), Ruas (1996:26), Largen (2001:177), Channing (2001:327).

Ptychadena (Ptychadena) keilingi: Frétey et al. (2011:41).

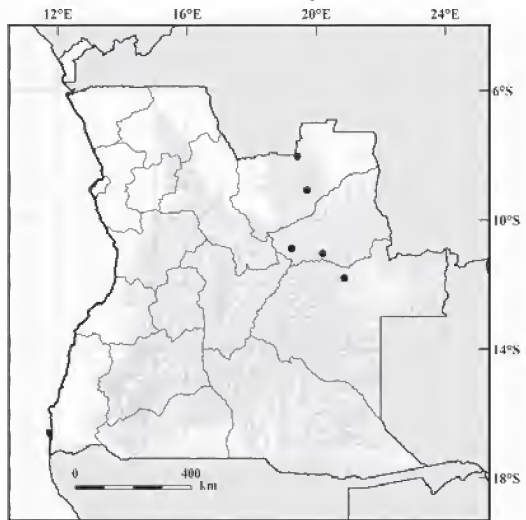
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from the Democratic Republic of Congo and adjacent northeastern Angola to extreme northwestern Zambia.

Occurrences in Angola (Map 83): The species occurs in northeastern Angola. **Lunda Norte:**

“Rivière Luíta river, Poste de Cuílo (Rio Luíta)” [−8.03333, 19.41667] (Laurent 1964a:141; Ruas 1996:27); “Poste de Luangue, humidiherbosa du risseau Katcheleka, affl. ouest Luangue, entre la Lunguena et le Tchá-Pemba (Posto do Luangue)” [−9.08333, 19.71667] (Laurent 1964a:141; Ruas 1996:27).

Lunda Sul: “Alto Chicapa” [−10.88333, 19.23333] (Laurent 1964a:141; Ruas 1996:27); “Dala” [−11.03333, 20.20000] (Monard 1937a:53, 1938:112; Forcart 1946:126; Marx 1959:442; Poynton and Broadley 1985b:154; Frost 1985:472, 2016; Ruas 1996:26). **Moxico:** “rives du lac Calundo (Lago Calundo)” [−11.80000, 20.86667] (Laurent 1964a:141; Ruas 1996:27). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16).



MAP 83. Distribution of *Ptychadena keilingi* in Angola.

Taxonomic and distributional notes: Two of the five type specimens noted by Monard (1937a) remain in the Musée d'Histoire Naturelle, La-Chaux-de-Fond, Switzerland. Little is known of this frog species.

***Ptychadena cf. mascareniensis* (Duméril and Bibron, 1841)**

MASCARENE GRASS FROG

Rana mascareniensis Duméril and Bibron 1841:350. Syntypes: MNHN 4379–4381 *vide* Guibé (1950), MCZ A-1044 (exchange from MNHN) *vide* Barbour and Loveridge (1929), USNM 10975 (2 specimens) *vide* Cochran (1961) (collectors J.R.C. Quoy and J.P. Gaimard, J.-J. Dussumier, J.-B. Leschenault, Nivoy). Type locality: “îles Mascareignes, ou les Séchelles, Maurice et Bourbon.” Restricted to “Island of Réunion, Mascarene Islands (Indian Ocean)” by Cochran (1961) and “Ile Bourbon” [= Réunion] by Blommers-Schlösser and Blanc (1991).

Ptychadena mascareniensis hylaea Schmidt and Inger 1959:83). Holotype: FMNH 57965 (collector H.A. Beatty). Type locality: “Mount Nimba, Liberia” Liberia.

Rana mascareniensis: Boulenger (1905:107).

Rana (Ptychadena) mascareniensis: Monard (1937a:50, 1938:108).

Rana mascareniensis mascareniensis: Loveridge (1957:342), Ruas (1996:25, 2002:144).

Ptychadena mascareniensis: Cei (1977:16, 17), Frost (1985:473), Channing (2001:329), Pickersgill (2007a:128), Frost (2016), Conradie et al. (2016:18).

Ptychadena mascareniensis bibroni: Perret (1979:6).

Ptychadena hylaea: Lamotte (1967:647), Pickersgill (2007a:134).

Ptychadena (Ptychadena) mascareniensis: Frétey et al. (2011:41).

Global conservation status (IUCN): Least Concern.

Global distribution: Populations from throughout sub-Saharan Africa currently referred to this species likely represent multiple undescribed species or should be referred to other described species in this genus.

Occurrences in Angola (Map 84): The species is widespread across the country.

Lunda Sul: “Dala” [-11.03333, 20.20000] (Monard 1937a:50, 1938:108, Ruas 1996:25).

Moxico: “Rio Caluando” [-11.46667, 17.70000] (Ruas 1996:25, 2002:144); “Lago Dilolo” [-11.50000, 22.01667] (Ruas 1996:25, 2002:144); “Lago Cameia” [-11.71667, 20.80000] (Ruas 1996:25, 2002:144).

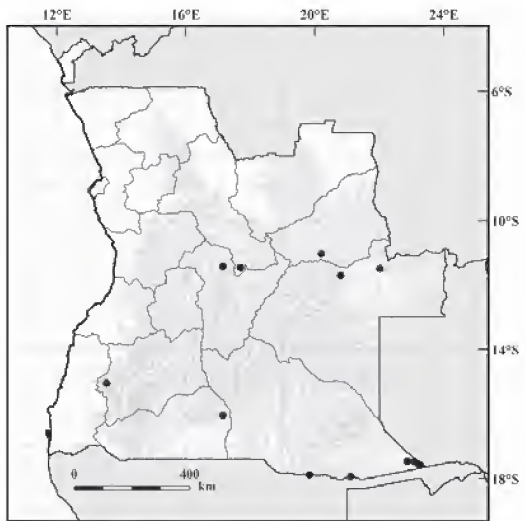
Bié: “Chitau” [-11.43333, 17.15000] (Schmidt and Inger 1959:84; Ruas 1996:25). **Huíla:** “Huíla” [-11.71667, 20.80000] (Schmidt and Inger 1959:84).

Cunene: “Chimporo” [-16.03333, 17.15000] (Monard 1937a:50, 1938:108; Ruas 1996:25).

Cuabango Cubango: “Cuabango basin (29)” [-17.87291, 19.83333] (Conradie et al. 2016:9-10,18); “Cuabango basin (39)” [-17.46333, 22.86638] (Conradie et al. 2016:9-10,18); “Cubango basin (41a)” [-17.46777, 23.06667] (Conradie et al. 2016:9-10,18); “Cubango basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10,18); “Cubango basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10,18); “Cuito basin (63)” [-17.93611, 21.10269] (Conradie et al. 2016:9,12,18).

Undetermined Locality: “Between Benguella and Bié (Entre Benguela e Bié)” (Boulenger 1905:107; Ruas 1996:25); “Angola Ouest?” (Perret 1979:9); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16); “arid territories along the coast” (Cei 1977:17); “plateaus regions” (Cei 1977:17).

Taxonomic and distributional notes: *Ptychadena mascareniensis* is a complex of multiple cryptic forms, possibly representing as many as ten separate species (Vences et al. 2004; Zimkus et al. 2017) with the nominotypical form likely being restricted to Madagascar, the Seychelles, and the Mascarenes. While Zimkus et al. (2017) did not include Angolan populations in their molecular phylogenetic study, it is likely that Angolan populations correspond to both *P. nilotica* and one undescribed species (their OTU 6) that occurs in Gabon and Democratic Republic of Congo. Schmidt and Inger (1959) described *Ptychadena mascareniensis hylaea* from Mount Nimba, Liberia and remarked on an individual (CNHM 74214) from “Huíla in the highlands of southern Angola,” deposited in the Chicago Natural History Museum (now the Field Museum of Natural



MAP 84. Distribution of *Ptychadena* cf. *mascareniensis* in Angola.

History), that they considered to belong to *hylaea*. Lamotte (1967) subsequently considered *hylaea* as a distinct species, whereas Perret (1979) considered it to be a synonym of *P. macareniensis bibroni* (Hallowell, 1845) (= *Ptychadena bibroni*) (Frost 1985). Frétey et al. (2011) synonymized *hylaea* with *P. mascareniensis*, while authors such as Pickersgill (2007a) continue to recognize the species. A taxonomic revision to determine the status of this species in the country is being conducted by R. Ernst (Conradie et al. 2016).

***Ptychadena cf. mossambica* (Peters, 1854)**

MOZAMBIQUE GRASS FROG

Rana mossambica Peters 1854:626. Syntypes: ZMB 4418, 4419a-b, 37555 (collector W.C.H. Peters). Type locality: “Cabeceira, Queillimane, Tette, Boror” [= Cabeceira, Quelimane (Companhia do Boror)] Mozambique.

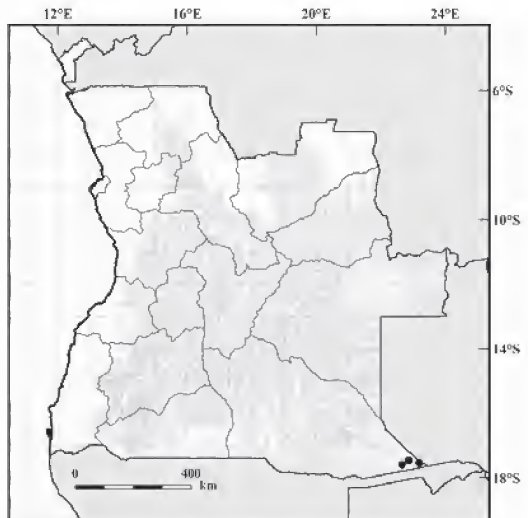
Ptychadena cf. mossambica: Conradie et al. (2016:18).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Kenya south to Mozambique and KwaZulu-Natal, eastwards to Botswana, the Caprivi Strip of Namibia and adjacent south-eastern Angola.

Ocurrences in Angola (Map 85): Possibly limited to the southeastern region of the country. **Cuando Cubango:** “lower Cuando River near the village of Jamba (38)” [-17.58830, 22.65694] (Conradie et al. 2016:9-10,18); “lower Cuando River near the village of Jamba (39)” [-17.46333, 22.86638] (Conradie et al. 2016:9-10,18); “lower Cuando River near the village of Jamba (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10,18).

Taxonomic and distributional notes: Conradie et al. (2016) recently collected some individuals from Cuando Cubango Province and provisionally assigned them to the *Ptychadena mossambica* complex.



MAP 85. Distribution of *Ptychadena cf. mossambica* in Angola.

***Ptychadena oxyrhynchus* (Smith, 1849)**

SHARP-NOSED GRASS FROG

Rana oxyrhynchus Smith 1849a: pl. 77, figs. 2, 2a, 2b, 2c and two accompanying unnumbered pages. Lectotype: BMNH 58-11-25-97 designated by Guibé and Lamotte (1961:382) (collector A. Smith). Type locality: “Cape of Good Hope” *vide* Guibé and Lamotte (1961”1960”:382), South Africa. According to Boulenger (1882:52) the specimens noted are from “Cape of Good Hope” and “Natal”, as also reported by Guibé and Lamotte (1961 “1960”:382). The original type locality is “Kaffir land and the country about Port Natal.”

Rana oxyrhyncha: Bocage (1866a:53, 1870:68, 1895a:159, 1897b:210), Ferreira (1900a:53, 1904:112, 1906:160), Schmidt (1936:129), Schmidt and Inger (1959:91).

Rana oxyrhynchus: Boulenger (1882:51, 1905:108), Bocage (1887c:211),

Rana (Ptychadena) oxyrhynchus: Monard (1937a:49, 1938:107), Parker (1936:142).

Rana oxyrhynchus oxyrhynchus: Mertens (1937a:19, 1938a:427), Laurent (1950a:14, 1954a:73).

Rana (Ptychadena) oxyrhynchus oxyrhynchus: Hellmich (1957a:27).

Ptychadena oxyrhynchus: Guibé and Lamotte (1960 “1961”:382), Laurent (1964a:133), Cei (1977:17), Frost (1985:474, 2016), Ruas (1996:25), Channing (2001:334), Ceriaco et al. (2016b:46).

Ptychadena (Ptychadena) oxyrhynchus: Frétey et al. (2011:41).

Global conservation status (IUCN): Least Concern.

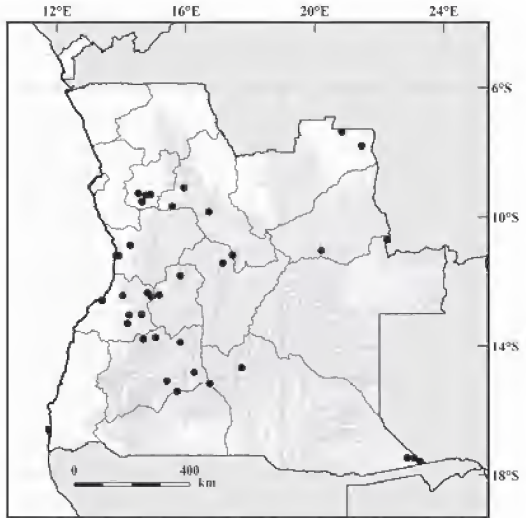
Global distribution: The species is widely distributed in savannas across western, Central, and into southern Africa.

Ocurrences in Angola (Map 86): The

species occurs from western Angola to the northeastern regions. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:14, 1954a:73, 1964a:133; Ruas 1996:25); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:14, 1954a:73; Ruas 1996:25). **Lunda Sul:** “Dala” [-11.03333, 20.20000] (Monard 1937a:49, 1938:107; Ruas 1996:25). **Moxico:** “Teixeira de Sousa” [-10.70000, 22.23333] (Mertens 1937a:19). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:53, 1895a:159; Boulenger 1882:51, 1905:108; Ruas 1996:25); “Pungo-Andongo” [-9.66667, 15.58333] (Bocage 1895a:159; Ruas 1996:25), “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:46).

Kwanza Norte: “Rio Luinha” [-9.26667, 14.53333] (Ferreira 1906:160; Ruas 1996:25);

“N’dalla Tando (Dala Tando)” [-9.30000, 14.91667] (Ferreira 1904:112; Ruas 1996:25); “Cazenogo” [-9.33333, 14.76667] (Ferreira 1904:112; Ruas 1996:25); “Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:27). **Kwanza Sul:** “Congulu (Congulo)” [-10.86667, 14.28333] (Parker 1936:142; Ruas 1996:25); “Chingo” [-11.20000, 13.85000] (Ferreira 1904:112; Ruas 1996:25); “Novo Redondo, grotte de Furna, fleuve N’Gunza (Rio N’Guanza)” [-11.20000, 13.93333] (Laurent 1954a:73; Ruas 1996:25). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1936:129; Ruas 1996:25); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:129; Ruas 1996:25). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1938:107; Ruas 1996:25); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:142; Ruas 1996:25). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:159; Ruas 1996:25); “Quissange” [-12.43333, 14.05000] (Bocage 1895a:159; Ruas 1996:25); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:159; Ruas 1996:25); “Benguella” [-12.58333, 13.41667] (Bocage 1895a:159; Ruas 1996:25); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:27); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:427; Ruas 1996:25); “Hanha” [-13.30000, 14.20000] (Bocage 1897b:210; Ruas 1996:25). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:159; Ruas 1996:25); “Kalukembé” [-13.78333, 14.68333] (Monard 1937a:49, 1938:107; Ruas 1996:25); “Sangevé” [-13.88333, 15.83333] (Monard 1937a:49, 1938:107; Ruas 1996:25); “Indungu” [-14.81667, 16.26667] (Monard 1937a:49, 1938:107; Ruas 1996:25); “Osi” [-15.08333, 15.41667] (Monard 1937a:49, 1938:107; Ruas 1996:25); “Kakulakaze (Kuluñi)” [-15.41667, 15.73333] (Monard 1937a:49, 1938:107; Ruas 1996:25). **Cunene:** “Riusseau Mbalé (Bale)” [-15.16667, 16.75000] (Monard 1937a:49, 1938:107; Ruas 1996:25). **Cuando Cubango:** “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9,18); “Cuando basin (39)” [-17.46333, 22.86638] (Conradie et al. 2016:9-10,18); “Cuando basin (41a)”



MAP 86. Distribution of *Ptychadena oxyrhynchus* in Angola.

[-17.46777, 23.06667] (Conradie et al. 2016:9-10,18); “Quando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10,18). **Undetermined Locality:** without precise locality (Bocage 1870:68; Boulenger 1900:53; Laurent 1954:73); “Rio Quando” (Bocage 1895a:160; Ruas 1996:25); “Rio Quanza” (Boulenger 1905:108); “Carangigo” (Boulenger 1882:51); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16); “plateaus regions” (Cei 1977:17); “arid territories along the coast” (Cei 1977:17).

Taxonomic and distributional notes: This species occurs throughout much of sub-Saharan Africa in areas of moist savanna, near forest edges, in secondary vegetation with tall herbaceous vegetation, and in marshy and agricultura areas (Schmidt and Inger 1959; Ruas 1996; Rödel et al. 2004; Frost 2016). It appears to be relatively common in Angola, except in the arid and semiarid areas in southern regions of the country (Ruas 1996). According to Channing (2001) this species often occurs alongside *Amietia angolensis* (Bocage, 1866).

Ptychadena perplicata Laurent, 1964

MANY-RIDGED GRASS FROG

Ptychadena perplicata Laurent 1964a:136, fig. 36. Holotype: MD 5513 (collectors A. Barros Machado and E. Luna de Carvalho). Type locality: “Alto Chicapa, humidiherbosa des sources du Cuílo” [= Cuílo River] Lunda Sul Province, Angola.

Ptychadena ansorgei: Laurent (1954a:74).

Ptychadena perplicata: Cei (1977:16), Frost (1985:474, 2016), Ruas (1996:27), Largen (2000:177), Channing (2001:336).

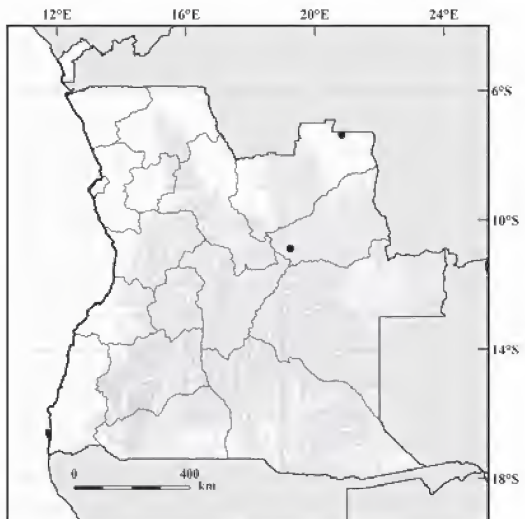
Ptychadena (*Ptychadena*) *perplicata*: Frétey et al. (2011:41).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola and Zambia.

Ocurrences in Angola (Map 87): Published records are limited to the far north of the country. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:74, 1964a:136; Ruas 1996:27). **Lunda Sul:** “Alto Chicapa, humidiherbosa des sources du Cuílo (Rio Cuílo, nascente)” [-10.88333, 19.23333] (Laurent 1964a:136; Frost 1985:474, 2016; Ruas 1996:27, Largen 2001:177).

Taxonomic and distributional notes: According to Ruas (1996) and Largen (2000), *P. perplicata* is only known from forest galleries near the type locality. However, Channing (2001) provided several records without detailed information, presumably based on museum specimens, that suggest this species is more widespread in the country.



MAP 87. Distribution of *Ptychadena perplicata* in Angola.

Ptychadena porosissima (Steindachner, 1867)

STRIPED GRASS FROG

Rana porosissima Steindachner 1867:18, pl. 1, figs. 9-13. Holotype: NHMW 14772 (collector F.A.P. Bayão) fide Häupl and Tiedemann (1978:28). Type locality: “Angola”.

Ptychadena loveridgei Laurent 1954b:14. Holotype: MRAC 109038. Type locality: “Tare, Busanza, région d’Astrida, env. l. 800 m., Ruanda.”

Rana porosissima: Bocage (1887a:191, 1897b:211), Schmidt and Inger (1959:96), Häupl and Tiedemann (1978:28), Häupl et al. (1994:32).

Rana mascareniensis: Bocage (1866a:53), Boulenger (1882:52).

Rana mascareniensis var. *porosissima*: Bocage (1895a:160), Ferreira (1897b:240).

Rana subpunctata: Loveridge (1953a:329).

Rana (Ptychadena) mascareniensis: Guibé and Lamotte (1957:978).

Rana loveridgei: Loveridge (1957:343).

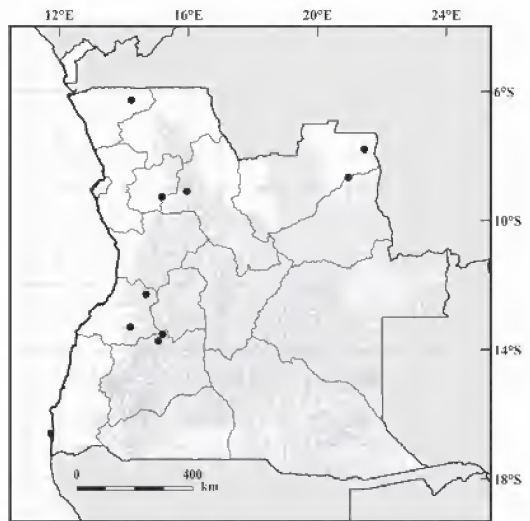
Ptychadena porosissima: Poynton and Broadley (1985b:149), Frost (1985:474, 2016), Ruas (1996:25), Largen (2001:342), Channing (2001:337), Channing et al. (2012:311).

Ptychadena (Ptychadena) porosissima: Frétey et al. (2011:41).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is widely distributed in southern and eastern Africa.

Occurrences in Angola (Map 88): The species occurs from central-west regions to northeastern Angola. **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:191, Bocage 1895a:160; Ruas 1996:25). **Kwanza Norte:** “Ambaca” [-9.26667, 15.18333] (Bocage 1895a:160; Ruas 1996:25). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:53, 1895a:160; Boulenger 1882:52; Ruas 1996:25). **Lunda Norte:** “Sombo” [-8.68333, 20.95000] (Laurent 1954b:14). **Benguela:** “Quibula” [-12.28333, 14.68333] (Bocage 1895a:160; Ruas 1996:25); “Hanha” [-13.30000, 14.20000] (Bocage 1897b:211; Ruas 1996:25). **Huíla:** “Rio Cuce (Rio Cusse)” [-13.51667, 15.20000] (Ferreira 1897b:240; Ruas 1996:25); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:160; Ferreira 1897b:240; Ruas 1996:25).



MAP 88. Distribution of *Ptychadena porosissima* in Angola.

Taxonomic and distributional notes: *Ptychadena porosissima* (Steindachner, 1867) was considered a variety of *Rana mascareniensis* (Duméril and Bibron, 1841) by Bocage (1895a) and Ferreira (1897b) and later by Guibé and Lamotte (1957). *Ptychadena loveridgei* Laurent, 1954 was synonymized with *P. porosissima* by Schmidt and Inger (1959). Loveridge (1953a) mistakenly considered *P. porosissima* a synonym of *P. subpunctata*, a position refuted by Schmidt and Inger (1959) who considered it a distinct species. Because of the similar general appearance of many species of *Ptychadena* and the use of characters of limited diagnostic utility in some descriptions, many names have been misapplied to more than one species. In this case, some records allocated to the *P. mascareniensis* complex may belong to *P. porosissima*.

Ptychadena subpunctata (Bocage, 1866)

SPOTTED GRASS FROG

Rana subpunctata Bocage 1866b:73. Holotype: MBL (collector F.A.P. Bayão) not located by Perret (1967a:21), possibly lost or destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” [= Calandula] Malanje Province, Angola.

Rana subpunctata: Bocage (1866a:54, 1895a:161, 1897a:203), Inger (1959:541).

Rana mascareniensis subpunctata: Mertens (1938a:427).

Rana subpunctata: Schmit and Inger (1959:102).

Ptychadena subpunctata: Laurent (1964a:134), Perret (1976a:21), Cei (1977:16, 17), Poynton and Broadley (1985b:143), Frost (1985:476, 2016), Ruas (1996:25, 2002:143), Channing (2001:340), Pickersgill (2007a:136), Conradie et al. (2016:18).

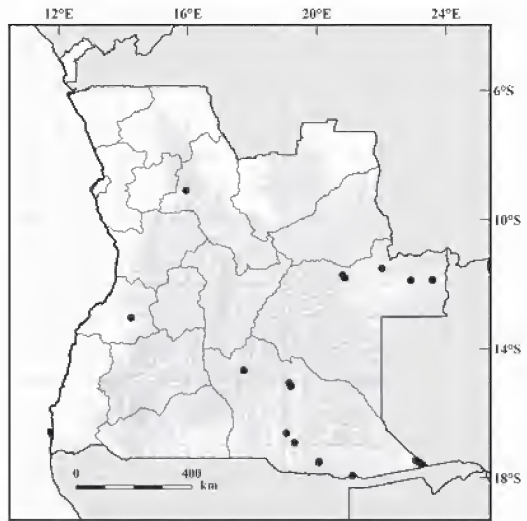
Ptychadena (Ptychadena) subpunctata: Frétey et al. (2011:41).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola, extending east into the southern Democratic Republic of Congo and Zambia, and south to northern Botswana and northern Namibia.

Occurrences in Angola (Map 89): The species occurs from central-west to eastern areas of Angola. **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:54, 1866a:73, 1895a:161, 1897a:203; Perret 1976a:21; Schmidt and Inger 1959:102; Poynton and Broadley 1985b:143; Frost 1985:476, 2016; Ruas 1996:25). **Moxico:** “Lago Dilolo” [-11.50000, 22.01667] (Ruas 1996:25, 2002:143); “Lago Cameia” [-11.71667, 20.80000] (Ruas 1996:25, 2002:143); “Rives du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:134; Ruas 1996:25); “Chites de la Lusivao, affl. du Zambèze, Calunda” [-11.86667, 23.58333] (Laurent 1964a:134; Ruas 1996:25); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:134; Ruas 1996:25). **Benguela:** “Cubal” [-13.03333, 14.25000] (Mertens 1938a:427; Ruas 1996:25). **Cuando Cubango:** “Cubango basin(6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9,18); “Cubango basin (27)” [-15.17127, 19.19433] (Conradie et al. 2016:8-9,18); “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:9-10,18); “Cuito basin (30f)” [-17.52638, 20.05825] (Conradie et al. 2016:9-10,18); “Cuito basin (33a)” [-16.90980, 19.30769] (Conradie et al. 2016:9-10,18); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9-10,18); “Cuando basin (41a)” [-17.46777, 23.06667] (Conradie et al. 2016:9-10,18); “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10,18); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10,18); “Cuito basin (56)” [-15.06275, 19.14322] (Conradie et al. 2016:9,12,18); “Cuito basin (63)” [-17.93611, 21.10269] (Conradie et al. 2016:9,12,18). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16); “plateaus regions” (Cei 1977:16); “Angola” (Poynton and Broadley 1985b:143); “north Angola” (Schmidt and Inger 1959:140).

Taxonomic and distributional notes: *Rana subpunctata* was used by Bocage (1866a) as a *nomen nudum*, but in the same issue of the journal, Bocage (1866b) published a valid description of the new species. According to Perret (1976a), the holotype cited by Bocage from “Duque de Bragança” was not present in the Museu Bocage when he examined that collection.



MAP 89. Distribution of *Ptychadena subpunctata* in Angola.

Ptychadena taenioscelis* Laurent, 1954*DWARF GRASS FROG**

Ptychadena taenioscelis Laurent 1954b:25, pl. 5, fig. 1, pl. 4, fig. 6. Holotype: MRAC 13122 (collector G.F. de Witte). Type locality: “Lukula, près de Kiambi, Tanganyika,” Democratic Republic of Congo.

Ptychadena taenioscelis: Laurent (1964a:140), Cei (1977:16), Poynton and Broadley (1985b:153), Poynton and Haacke (1993:14), Ruas (1996:26), Channing (2001:341), Frost (2016), Conradie et al. (2016:18).

Ptychadena pumilio: Largen (2001:342).

Ptychadena (Ptychadena) pumilio: Frétey et al. (2011:41).

Global conservation status (IUCN): Least Concern.

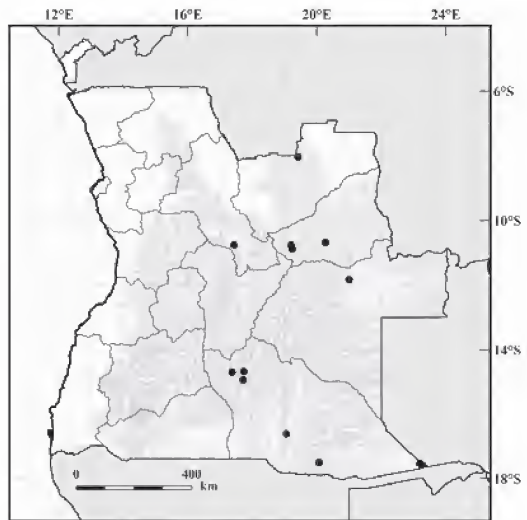
Global distribution: The species is broadly distributed across southern, Central, and eastern Africa.

Ocurrences in Angola (Map 90): The species occurs in the east of the country.

Lunda Norte: “Rivière Luíta, Poste de Cuilo (Rio Luíta)” [-8.03333, 19.41667] (Laurent 1964a:140; Ruas 1996:26). **Lunda Sul:** “Luachimo, 120 km au sud de Vila Henrique de Carvalho (Luachimo)” [-10.68333, 20.26667] (Laurent 1964a:140; Ruas 1996:26); “Alto Chicapa, partie supérieure des chutes du Cuan-gu-Muqué (Rio Cuan-gu-Muqué)” [-10.76667, 19.20000] (Laurent 1964a:140; Ruas 1996:26); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:140; Ruas 1996:26). **Malanje:** “20 km NW of Quimbango (Quimbango)” [-10.76667, 17.43333] (Poynton and Haacke 1993:14; Ruas 1996:26). **Moxico:** “Réserve de chasse de Cameia, fosse inondé près de la route” [-11.83333, 21.00000] (Laurent 1964a:140; Ruas 1996:26). **Cuando Cubango:**

“Cubango basin (3)” [-14.94277, 17.71863] (Conradie et al. 2016:8-9,18); “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9,18); “Cubango basin (19)” [-14.70213, 17.37772] (Conradie et al. 2016:8-9,18); “Cuito basin (30d)” [-17.51327, 20.06111] (Conradie et al. 2016:9-10,18); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:19-10,18); “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10,18); “Cuando basin (43b)” (Conradie et al. 2016:9, 18); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10,18); “Cuito basin (62)” [-17.50875, 20.06608] (Conradie et al. 2016:9,12,18). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16).

Taxonomic and distributional notes: *Ptychadena taenioscelis* Laurent, 1954 has occasionally been treated as a synonym of *Ptychadena pumilio* (Boulenger 1920). Perret (1979) suggested that *P. taenioscelis* is probably a subspecies of *P. pumilio* and referred records of *P. taenioscelis* from western and Central Africa to this species. Largen (2001) noted the occurrence of *P. pumilio* in Angola, as did Frétey et al. (2011) who included *P. taenioscelis* and *P. smithi* Guibé, 1960 as synonyms of *P. pumilio*. Further studies are needed to understand whether these are two distinct species or in fact are one and the same. However, we choose to treat this as a species distinct from *Ptychadena pumilio*, following Poynton and Broadley (1985b), Channing (2001), Pickersgill (2007a), and Frost (2016).



MAP 90. Distribution of *Ptychadena taenioscelis* in Angola.

Ptychadena upembae* (Schmidt and Inger, 1959)*UPEMBA GRASS FROG**

Rana upembae Schmidt and Inger 1959:111, fig. 50. Holotype: MRAC 1228 (collector Mission G.F. de Witte), formerly Inst. Parcs Natl. Congo Belge *fide* Lang (1990:13). Type locality: “Kaswabilenga, Parc National de l’Upemba, Province Katanga, Belgian Congo” (Schmidt and Inger 1959:111), Democratic Republic of Congo.

Ptychadena upembae machadoi Laurent 1964a:134. Holotype: MD 5364 (unnamed local collector). Type locality: “Alto Chicapa, Lunda,” Angola.

Ptychadena upembae machadoi: Ceï (1977:16).

Ptychadena upembae: Poynton and Broadley (1985b:150), Frost (1985:477, 2016), Ruas (1996:26, 2002:144), Channing (2001:342).

Ptychadena (*Ptychadena*) *upembae*: Frétey et al. (2011:42).

Global conservation status (IUCN):

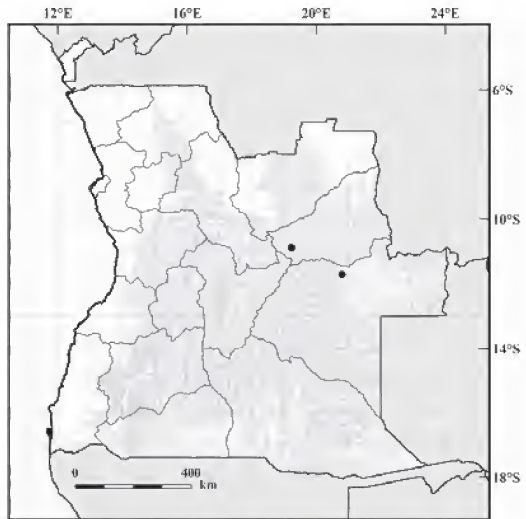
Least Concern.

Global distribution: The species extends across south-central African from Angola, the southern Democratic Republic of Congo and Zambia to Mozambique.

Ocurrences in Angola (Map 91): The species occurs in eastern Angola. **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:134; Ruas 1996:25). **Moxico:** “Lago Cameia” [-11.71667, 20.80000] (Ruas 1996:25, 2002:144). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Ceï 1977:16). Channing (2001) additionally plotted unspecific localities in a 2” map.

Taxonomic and distributional notes:

Currently *P. upembae machadoi* is recognized as a synonym of *Ptychadena upembae* (Channing 2001; Frétey et al. 2011, Frost 2016).



MAP 91. Distribution of *Ptychadena upembae* in Angola.

Ptychadena uzungwensis* (Loveridge, 1932)*UDZUNGWA GRASS FROG**

Rana mascareniensis uzungwensis Loveridge 1932a:384. Holotype: MCZ A-16626 (collector A. Loveridge). Type locality: “Dabaga, Uzungwe Mountains, Tanganyika Territory” [Tanzania].

Rana mascareniensis subpunctata: Schmidt (1936:129).

Ptychadena uzungwensis: Laurent (1954b:10, 1964a:139), Ceï (1977:16), Poynton and Broadley (1985b:151), Poynton and Haacke (1993:14), Frost (1985:477, 2016); Ruas (1996:26, 2002:145), Channing (2001:344), Conradie et al. (2016:18).

Rana mascareniensis uzungwensis: Loveridge (1953a:372, 1957:342).

Rana uzungwensis: Schmidt and Inger (1959:117).

Ptychadena subpunctata: Ruas (1996:25).

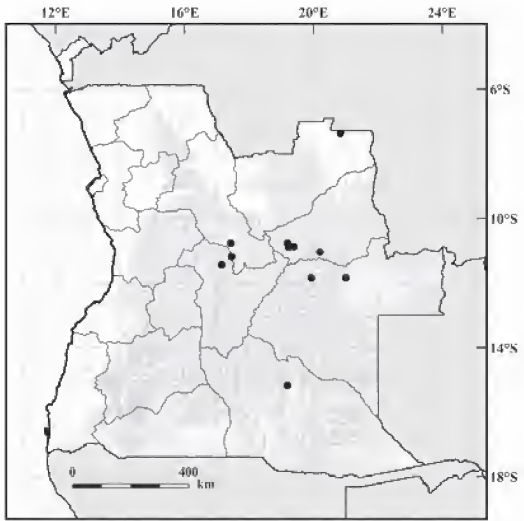
Ptychadena (*Ptychadena*) *uzungwensis*: Frétey et al. (2011:42).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from central eastern Angola and the southeastern Democratic Republic of Congo, Zambia and Tanzania south to northern Zimbabwe.

Ocurrences in Angola (Map 92): The species occurs chiefly in eastern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954b:10). **Lunda Sul:** “Alto Chicapa, hemidi-

herbosa près de la cascade du Cuango-Muqué” [-10.76667, 19.20000] (Laurent 1964a:139); “Alto Chicapa, Lunda hemidiherbosa des sources du Cuílo” [-10.86667, 19.40000] (Laurent 1964a:139); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:139); “Dala” [-11.03333, 20.20000] (Laurent 1964a:139). **Malanje:** “20 km NW of Quimbango” [-10.76667, 17.43333] (Poynton and Haacke 1993:14). **Moxico:** “Calombe” [-11.83333, 19.93333] (Ruas 2002:145); “Réserve de chasse de Cameia dans la steppe de Ñarikumbi” [-11.83333, 21.00000] (Laurent 1964a:139). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1936:129; Laurent 1954b:9; Schmidt and Inger 1959:118); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:129; Laurent 1954b:9; Schmidt and Inger 1959:118). **Cuando Cubango:** “Cuito basin (27)” [-15.17127, 19.19433] (Conradie et al. 2016:8-9,18). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola”(Ceil 1977:16).



MAP 92. Distribution of *Ptychadena uzungwensis* in Angola.

Taxonomic and distributional notes: Loveridge (1953a) believed that *Rana mascareniensis uzungwensis* Loveridge, 1932 was erroneously synonymized with *Rana subpunctata* (Bocage, 1866) by Schmidt (1936) and cited specimens from “Gauca” and “Chitau” in Angola as belonging to *P. uzungwensis*. This species is considered valid by the majority of modern authors (e.g., Poynton and Broadley 1985b; Channing 2001; Frost 2016) and according to Poynton and Broadley (1985b) it inhabits grasslands and dambos. Poynton and Haacke (1993) reported one individual from “20 km NW of Quimbango” collected by G. G. A. Voigt in a water-logged grassland. Channing (2001) provided several records in the western regions of the country based on previously unpublished museum records.

Family Phrynobatrachidae Laurent, 1941

Genus *Phrynobatrachus* Günther, 1862

Phrynobatrachus brevipalmatus (Ahl, 1923)

AHL'S SCREECHING FROG (Endemic)

Hylarthroleptis brevipalmatus Ahl “1923” 1925:102. Holotype: ZMB 26689 (collector K. May). Type locality: “Loanda” [= Luanda] Luanda Province, Angola.

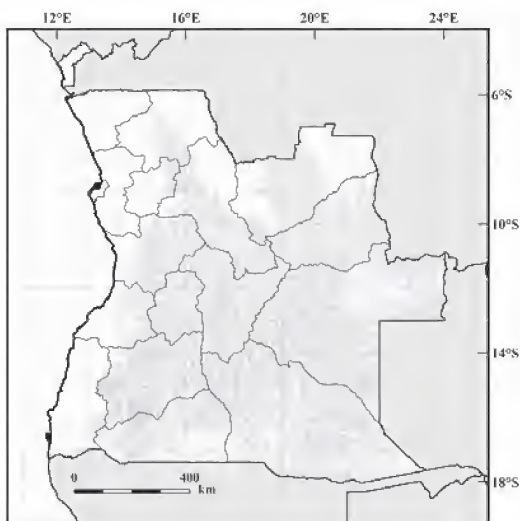
Phrynobatrachus brevipalmatus: Frétey et al. (2011:38), Frost (2016).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is only known from Angola.

Ocurrences in Angola (Map 93): The species is known from Luanda. **Luanda:** “Loanda” [-8.83333, 13.26667] (Ahl “1923” 1925:102; Frost 2016).

Taxonomic and distributional notes: According to the original description, this species is closely related to *Hylarthroleptis graueri* (Nieden, 1911) from eastern Africa. This species was not discussed by Zimkus et al. (2010) and no further details are available for its biology and systematics.



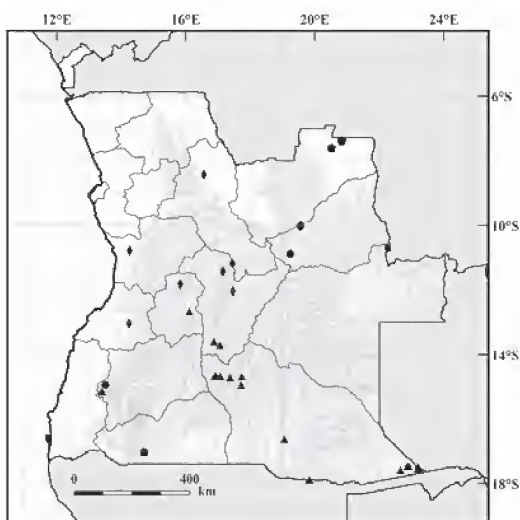
MAP 93. Distribution of *Phrynobatrachus brevipalmatus* in Angola.

Phrynobatrachus cryptotis group

Given the considerable nomenclatural and taxonomic confusion regarding *P. cryptotis*, *P. mababiensis*, *P. minutus* and *P. parvulus*, we have opted to combine all of their distributional and taxonomic notes into the same account, although, specific accounts for each one, with the list of chresonyms and type specimen data still follow below. Records attributed to each species are provided below separately, indicated by the name and noting the different symbols used to plot the records on the combined map.

Ocurrences in Angola (Map 94):

***Phrynobatrachus cryptotis* (plotted as circles).** **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:144; Ruas 1996:27); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:144; Ruas 1996:27). **Huíla:** “Boca de Humpata” [-14.93333, 13.51667] (Laurent 1964a:144; Ruas 1996:27). **Undetermined Locality:** “arid territories along the coast” (Ceil 1977:18). ***Phrynobatrachus mababiensis* (plotted as triangles).** **Bié:** “Cuando basin (11)” [-13.69413, 17.06177] (Conradie et al. 2016:8-9,16); “Cuando basin (12a)” [-13.59333, 16.87986] (Conradie et al. 2016:8-9,16). **Huambo:** “Cuando basin (18)” [-12.67105, 16.11111] (Conradie et al. 2016:8-9,16). **Huíla:** “Nuntechite lagoon” [-15.13333, 13.41667] (Poynton and Haacke 1993:14; Ruas 1996:27). **Quando Cubango:** “Quando basin (3)” [-14.94277, 17.71863] (Conradie et al. 2016:8-9,16); “Quando basin (6b)” [-14.67458,



MAP 94. Distribution of *Phrynobatrachus cryptotis* group in Angola.

17.73544] (Conradie et al. 2016:8-9,16); “Cuando basin (19)” [-14.70213, 17.37772] (Conradie et al. 2016:8-9,16); “Cuando basin (21)” [-14.66586, 17.07661] (Conradie et al. 2016:8-9,16); “Cuando basin (22c)” [-14.65386, 16.93547] (Conradie et al. 2016:8-9,16); “Cuando basin (22d)” [-14.64991, 16.90739] (Conradie et al. 2016:8-9,16); “Cuando basin (29)” [-17.87291, 19.83333] (Conradie et al. 2016:9-10,16); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9-10,16); “Cuando basin (38)” [-17.58830, 22.65694] (Conradie et al. 2016:9-10,16); “Cuando basin (39)” [-17.46333, 22.86638] (Conradie et al. 2016:9-10,16); “Cuando basin (40)” [-17.45786, 22.91191] (Conradie et al. 2016:16); “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10,16); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10,16). ***Phrynobatrachus minutus* (plotted as pentagons). Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:74; Ruas 1996:27); “galerie forestière de la Luachimo (Luachimo)” [-7.38333, 20.85000] (Laurent 1950a:15; Ruas 1996:27); “Marrura rive droite de la Tshikapapa, 50 km sud-ouest de Dundo (Marrura)” [-7.60000, 20.51667] (Laurent 1954a:74; Ruas 1996:27). **Cunene:** “Donguena (Cunene)” [-17.01667, 14.71667] (Laurent 1954a:74; Ruas 1996:27). **Undetermined Locality:** “Station Quanza (Estação do Quanza)” (Laurent 1954a:74; Ruas 1996:27); with no precise locality (Laurent 1954a:74); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16); “plateaus regions” (Cei 1977:17). ***Phrynobatrachus parvulus* (plotted as diamonds). Lunda Sul:** “Alto Cuílo, Poste de Cacolo, ruisseau cascade Ná-Ipanha” [-10.00000, 19.58333] (Laurent 1964a:144); “Alto Cuílo, rives du Cuílo (Cuílo)” [-10.01667, 19.55000] (Laurent 1964a:144); “Alto Chicapa, humidiherbosa des sources de la Kamutongola” [-10.88333, 19.25000] (Laurent 1964a:144). **Moxico:** “Teixeira de Sousa” [-10.70000, 22.23333] Mertens (1937:20). **Malanje:** “Bange N’golla (Dange)” [-8.43333, 16.56667] (Boulenger 1905:109; Loveridge 1933:386; Marx 1958:425; Schmidt and Inger 1959:160; Poynton and Broadley 1985b:169; Frost 1985:449, 2016; Ruas 1996:27). **Kwanza Sul:** “Calaongo below Congulu (Carlaongo)” [-10.78333, 14.26667] (Parker 1936:142; Ruas 1996:27). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1936:131; Ruas 1996:27); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:131, Ruas 1996:27); “General Machado” [-12.03333, 17.46667] Mertens (1937:20). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937a:58, 1938:118, Ruas 1996:27). **Benguela:** “Cubal” [-13.03333, 14.25000] Mertens (1937:20). **Cuando Cubango:** “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10,17). **Undetermined Locality:** “without precise locality” (Schmidt 1936:131).

Taxonomic and distributional notes: Opinions in the literature vary as to whether three commonly reported species from Angola are conspecific: *P. mababiensis* FitzSimons, 1932, *P. parvulus* (Boulenger, 1905) and *P. minutus* (Boulenger, 1895). Loveridge (1953) assigned a specimen previously identified as *P. parvulus* to *P. mababiensis*, suggesting that *P. parvulus* was a western relative of *P. mababiensis* or perhaps a synonym of *Phrynobatrachus minutus*. Poynton and Broadley (1985b:165, 170) discussed difficulties in separating *P. parvulus* and *P. mababiensis* based on external morphology. Zimkus et al. (2010) recently used molecular phylogenetic analyses to reveal that there are probably three different species currently recognized as *P. mababiensis*. If *P. minutus* is known only from Ethiopia, it is highly likely that the Angolan records assigned to this species are misidentified and instead belong to one of the other three species. With some reservations, Laurent (1964a) cited *P. cryptotis* for Angola, though he recognized that these might represent *P. parvulus* instead, which is a similar species (Drewes and Vindum 1994). It is likely that the Angolan specimens mapped here represent a combination of *P. mababiensis* and *P. parvulus*.

Phrynobatrachus cryptotis* Schmidt and Inger, 1959*CRYPTIC RIVER FROG**

Phrynobatrachus cryptotis Schmidt and Inger 1959:143, fig. 60, pl. 5, fig. 5. Holotype: IRSNB 1.493 (collector G.F. de Witte), formerly Institut des Parcs Nationaux du Congo Belge n. 1926. Type locality: “upper Bwalo River (an affluent from the left in on the left of the Muye, which is an affluent from the right of the Lufira)” (Schmidt and Inger 1959:143), [= Parc National de l’Upemba, upper Katanga], Democratic of Republic of Congo.

Phrynobatrachus cryptotis: Laurent (1964a:144), Cei (1977:18), Frost (1985:445, 2016), Ruas (1996:27), Frétey et al. (2011:39).

Global conservation status (IUCN): Data Deficient.

Global distribution: It is known with certainty only from the Democratic Republic of Congo.

Phrynobatrachus mababiensis* FitzSimons, 1932*MABABE PUDDLE FROG**

Phrynobatrachus mababiensis FitzSimons 1932:40. Holotype: TM 14838, formerly Vernay-Lang Khalari Expedition no. 989 (collector V.F. FitzSimons). Type locality: “Tsotsoroga Pan, Mababe Flats” (FitzSimons 1932:40), South Africa.

Phrynobatrachus mababiensis: Poynton and Broadley (1985b:165), Forst (1985:447, 2016), Poynton (1992:67), Poynton and Haacke (1993:14), Ruas (1996:27), Channing (2001:305), Channing and Howell (2006:284), Zimkus et al. (2010:42), Frétey et al. (2011:39), Channing et al. (2012:278), Conradie et al. (2016:16).

Global conservation status (IUCN): Least Concern.

Global distribution: This species occurs in savannas across southern and central Africa.

Phrynobatrachus minutus* (Boulenger, 1895)*ETHIOPIAN DWARF PUDDLE FROG**

Arthroleptis minutus Boulenger 1895a:539, pl. 30, fig. 4. Holotype: BMNH 1947.2.30.51 (collector A.D. Smith), formerly 95.6.11.8 *fide* Grandison in Frost (1985:448). Type locality: “Durro” (Boulenger 1895a:539), [= Duro], Ethiopia.

Arthroleptis minutus: Monard (1938:118).

Phrynobatrachus minutus: Laurent (1950a:15, 1954a:74), Loveridge (1957:349), Inger (1959:540), Cei (1977:16, 17), Ruas (1996:27), Frétey et al. (2011:39), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: This species is likely limited to Ethiopia.

Phrynobatrachus parvulus* (Boulenger, 1905)*DWARF RIVER FROG**

Arthroleptis parvulus Boulenger 1905:109, pl. 4, figs; 3, 3b. Syntypes: BMNH 1947.2.6.93-95 [3 specimens], formerly 1904.5.2.97-99 and FMNH 75381 (collector W.J. Ansorge) *fide* Grandison in Frost (1985:449). Type locality: “Bange N’golla” (Boulenger 1905:119), [= Dange] Malanje Province, Angola.

Arthroleptis parvulus: Loveridge (1933:386), Schmidt (1936:131), Parker (1936:142), Mertens (1937:20).

Arthroleptis minutus: Monard (1937a:58, 1938:118).

Phrynobatrachus parvulus: Marx (1958:425), Schmidt and Inger (1959:160), Laurent (1964a:144), Poynton and Broadley (1985b:169), Frost (1985:449, 2016), Poynton (1992:67), Ruas (1996:27), Channing (2001:308), Channing and Howell (2006:289), Frétey et al. (2011:40).

Phrynobatrachus cf. *parvulus*: Conradie et al. (2016:17).

Global conservation status (IUCN): Least Concern.

Global distribution: This species occurs in savannas across southern and central Africa.

Phrynobatrachus natalensis* (Smith, 1849)*NATAL DWARF PUDDLE FROG**

Stenhorhynchus natalensis Smith 1849b:24. Holotype: BMNH 1947.2.5.13 (formerly BMNH 62.3.14.20) (collector A. Smith) *vide* Grandison in Frost (1985:448). Type locality: “the country around Port Natal” [= Durban, KwaZulu-Natal], South Africa.

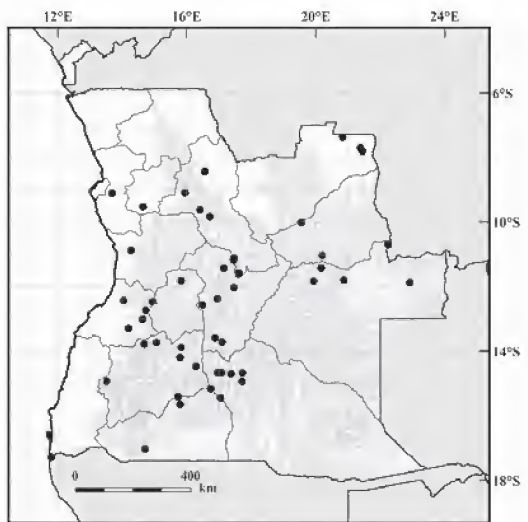
Phrynobatrachus natalensis: Günther (1865a:481), Bocage (1866a:54, 1870:68, 1879c:89, 1895a:162, 1897b:211), Boulenger (1882:112, 1905:108), Ferreira (1904:113, 1906:166), de Witte (1919:223), Schmidt (1936:130), Monard (1937a:57, 1938:117), Mertens (1937a:20), Parker (1939:142), Laurent (1950a:15, 1954a:74, 1964a:143), Loveridge (1957:348), Hellmich (1957a:24), Schmidt and Inger (1959:155), Inger (1959:540), Cei (1977:16, 17, 18), Poynton and Haacke (1993:14), Ruas (1996:27, 2002:145), Largen (2001:348), Channing (2001:307), Zimkus et al. (2010:886), Frétey et al. (2011:39), Frost (2016), Ceriaco et al. (2016b:39), Conradie et al. (2016:17).

Phrynobatrachus cf. *natalensis*: Ceriaco et al. (2014b:669).

Global conservation status (IUCN): Least Concern.

Global distribution: Populations referred to *P. natalensis* occur across sub-Saharan Africa, including in Angola, though this taxon likely contains multiple undescribed species.

Occurrences in Angola (Map 95): The species is widespread across nearly all of Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:15, 1954a:74; Ruas 1996:27); “Andrada (Luembe O)” [-7.70000, 21.38333] (Laurent 1954a:74; Ruas 1996:27); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:15, 1954a:74; Ruas 1996:27). **Lunda Sul:** “Dala” [-11.03333, 20.20000] (Monard 1937a:57, 1938:117; Ruas 1996:27); “Alto Cuílo, rives du Cuílo (rio Cuílo)” [-10.01667, 19.55000] (Laurent 1964a:143; Ruas 1996:27). **Malanje:** “Bange N’golla (Dange)” [-8.43333, 16.56667] (Boulenger 1905:108; Ruas 1996:27); “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:54, 1895a:162; Günther 1865a:481; Boulenger 1882:112; de Witte 1919:223; Poynton and Haacke 1993:14; Ruas 1996:27); “16 km SE of Quissol - Garibo” [-9.63333, 16.41667] (Poynton and Haacke 1993:14; Ruas 1996:27); “Cangan-dala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:39); “Capanda” [-11.58333, 17.61667] (Ceriaco et al. 2014b:669); “Reserva da Palanca Preta (nascentes do rio Cuanza)” [-11.11667, 17.46667] (Ruas 2002:145); “Rio Caluando (nascente)” [-11.11667, 17.46667] (Ruas 1996:27, 2002:145). **Moxico:** “Teixeira de Sousa” [-10.70000, 22.23333] (Mertens 1937:20); “Posto Bussaco” [-11.43333, 20.16667] (Ruas 2002:145; Ruas 1996:27); “Rives du lac Calundo (Lago Calundo)” [-11.80000, 20.86667] (Laurent 1964a:143; Ruas 1996:27); “Rio Calombe (Reserva da Palanca Preta)” [-11.83333, 19.93333] (Ruas 1996:27, 2002:145); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:143; Ruas 1996:27). **Kwanza Norte:** “Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:24). **Bengo:** “Catete” [-9.11667, 13.70000] (Ferreira 1904:113; Ruas 1996:27). **Kwanza Sul:** “Congulu (Congulo)” [-10.86667, 14.28333] (Parker 1936:142; Ruas 1996:27). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1936:130; Ruas 1996:27); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:130; Ruas 1996:27); “General



MAP 95. Distribution of *Phrynobatrachus natalensis* in Angola.

Machado” [-12.03333, 17.46667] (Mertens 1937a:20); “Bihé” [-12.38333, 16.95000] (Bocage 1879a:89, 1895a:162; de Witte 1919:223; Ruas 1996:27); “Cubango basin (10)” [-13.71616, 17.09661] (Conradie et al. 2016:8-9,17); “Cubango basin (12a)” [-13.59333, 16.87986] (Conradie et al. 2016:17); “Cubango basin (17)” [-12.57008, 16.49111] (Conradie et al. 2016:8-9,17). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937a:57, 1938:117; Ruas 1996:27). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:162; de Witte 1919:223; Ruas 1996:27); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:162; de Witte 1919:223; Ruas 1996:27); “Ebanga” [-12.73333, 14.73333] (Monard 1937a:57, 1938:117; Ruas 1996:27); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:24); “Hanha” [-13.30000, 14.20000] (Bocage 1897b:211; Ruas 1996:27). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:162; de Witte 1919:223; Ruas 1996:27); “Kalukembé” [-13.78333, 14.68333] (Monard 1937a:57, 1938:117; Ruas 1996:27); “Sangevé” [-13.88333, 15.83333] (Monard 1937a:57, 1938:117; Ruas 1996:27); “Mukoti” [-14.20000, 15.80000] (Monard 1937a:57, 1938:117; Ruas 1996:27); “Kuvangu” [-14.46667, 16.30000] (Monard 1937a:57, 1938:117; Ruas 1996:27); “Boca de Humpata” [-14.93333, 13.51667] (Laurent 1964a:143; Ruas 1996:27); “Kangela (Kului)” [-15.41667, 15.73333] (Monard 1937a:57; 1938:117; Ruas 1996:27). **Namibe:** “Cunene mouth (Foz do Cune-ne)” [-17.28333, 11.80000] (Poynton and Haacke 1993:14; Ruas 1996:27). **Cunene:** “ruisseau Mbalé (Bale)” [-15.16667, 16.75000] (Monard 1937a:57, 1938:117; Ruas 1996:27); “Kuvelai” [-15.65000, 15.80000] (Monard 1937a:57, 1938:117; Ruas 1996:27); “Donguena” [-17.01667, 14.71667] (Laurent 1954a:74; Ruas 1996:27). **Cuando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1938:117; Ruas 1996:27); “Cubango basin (3)” [-14.94277, 17.71863] (Conradie et al. 2016:8-9,17); “Cubango basin (6b)” [-14.67458, 17.73544] (Conradie et al. 2016:8-9,17); “Cubango basin (19)” [-14.70213, 17.37772] (Conradie et al. 2016:8-9,17); “Cubango basin (21)” [-14.66586, 17.07661] (Conradie et al. 2016:17); “Cubango basin (22d)” [-14.66278, 16.96081] (Conradie et al. 2016:17). **Undetermined Locality:** without precise locality (Bocage 1870:68; Ferreira 1906:166; Schmidt 1936:130); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16); “plateaus regions” (Cei 1977:17); “arid territories along the coast” (Cei 1977:18).

Taxonomic and distributional notes: Schmidt and Inger (1959) provided a distribution map for *Phrynobatrachus natalensis* (Smith, 1849) with some records in Angola, though without additional information. The molecular phylogenetic analysis by Zimkus et al. (2010) revealed *Phrynobatrachus natalensis* to be a species complex, with Angolan records likely corresponding to their lineage “*natalensis* A.”

Phrynobatrachus plicatus (Günther, 1858)

COAST RIVER FROG

Hyperolius plicatus Günther 1858a:326. Holotype: BMNH 1947.2.29.97 [wrongly given as 1947.2.29.47 by Grandison in Frost (1985)], formerly BMNH 49.10.9.1 *vide* Grandison in Frost (1985:449) (collector unknown). Holotype is depicted in Günther “1858b” 1859:8, pl. 7, fig. C. Type locality: “Guinea” (Günther 1858a:326), later modified to “Coast of Guinea” (Günther “1858b” 1859:88).

Arthroleptis plicatus: Peters (1877a:618).

Phrynobatrachus plicatus: Zimkus et al. (2010:896), IUCN SSC Amphibian Specialist Group (2013c), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: This is a widespread species from western Africa.

Ocurrences in Angola (Map 96): The only record of this species in Angola is from the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:618).

Taxonomic and distributional notes: The record of this species in Angola is almost certain-

ly a misidentification as today the recognized distribution of this species is restricted to western Africa. It is possible that the Cabinda frog may be referable to *Phrynobatrachus auritus* Boulenger, 1900.



MAP 96. Distribution of *Phrynobatrachus plicatus* in Angola.

Family Pyxicephalidae Bonaparte, 1850

Genus *Amietia* Dubois, 1987

Amietia angolensis (Bocage, 1866)

ANGOLA RIVER FROG

Rana angolensis Bocage 1866b:73. Lectotype: MBL T.8-94 designated by implication by Perret (1976a:18), having listed syntype as holotype. Destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” (Bocage 1866b:73), [= Calandula] Malanje Province, Angola.

Rana angolensis: Bocage (1866a:54; 1866b:73, 1887c:211, 1895a:158, 1897a:203) Ferreira (1903:111), Boulenger (1882:50, 1905:108), Themido (1941:2), Laurent (1964a:132), Perret (1976a:18), Cei (1977:16, 17), Poynton and Broadley (1985b:131), Frost (1985:480), Gavetti and Andreone (1993:91), Poynton and Haacke (1993:14), Drewes and Vindum (1994:64), Ruas (1996:23, 2002:143), Largen (2001:331).

Rana Delalandi: Bocage (1870:68).

Rana chapini: Noble (1924:214).

Rana (Rana) angolensis: Monard (1937a: 43, 1938:99).

Rana fuscigula angolensis: Loveridge (1933:362, 1936b:410, 1953a:365, 1957:339), Schmidt (1936:128), Mertens (1937a:19, 1938a:426), Parker (1939:141), Laurent (1950a:14, 1954a:71), Hellmich (1957a:25).

Rana fuscigula: Inger (1959:540), Schmidt and Inger (1959:48).

Afrana angolensis: Channing (2001:255), Channing and Howell (2009:250), Pickersgill (2007a:98), Frétey et al. (2011:42).

Amietia angolensis: Channing et al. (2012:318), Channing and Baptista (2013:501), Frost (2016), Channing et al. (2016:15).

Amietia cf. *angolensis*: Ceriaco et al. (2016a:20).

Global conservation status (IUCN): Least Concern.

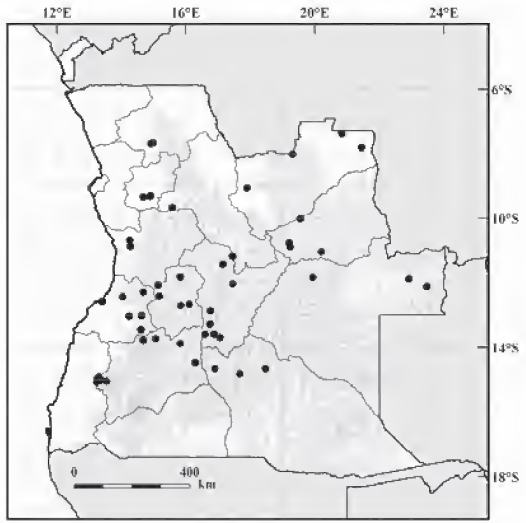
Global distribution: The species is known from western central Africa, extending from southern Congo and the Democratic Republic of Congo south through Angola and possibly in the Caprivi Strip of Namibia.

Ocurrences in Angola (Map 97): The species is found throughout Angola, especially in the northern and western regions. **Lunda**

Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1950a:14, 1954a:71; Ruas 1996:23); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1954a:71; Ruas 1996:23); “rive de la Tshimumbwe, 40 km à l’est de Dundo (rio Chiumbe)” [-8.01667, 19.31667] (Laurent 1950a:14; Ruas 1996:23); “Tshinguvu gallerie forestière de la Tshikapa, 50 km au sud-ouest de Dundo (Chingufu)” [-8.01667, 19.31667] (Laurent 1950a:14; Ruas 1996:23). **Lunda**

Sul: “Alto Cuílo, rives du Cuílo, (rio Cuílo)” [-10.01667, 19.55000] (Laurent 1964a:132; Ruas 1996:23); “Alto Chicapa, partie supérieur des chutes du Cuango-Muqué (rio Cuango-Muqué)” [-10.76667, 19.20000] (Laurent

1964a:132; Ruas 1996:23); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:132; Ruas 1996:23); “Dala” [-11.03333, 20.20000] (Monard 1937a:43, 1938:99; Ruas 1996:23). **Moxico:** “Calombe (Luso)” [-11.83333, 19.93333] (Ruas 1996:24, 2002:143); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:132; Ruas 1996:23); “Calunda, Alto Zambeze” [-12.11667, 23.46667] (Laurent 1964a:132; Ruas 1996:23). **Uíge:** “Serra do Pingano” [-7.68528, 14.92956] (Channing et al. 2016:16, 66); “Quilomosso” [-7.6599, 14.9821] (Channing et al. 2016:16, 66). **Malanje:** “Duque de Bragança (Calandula)” [-9.06667, 17.90000] (Bocage 1866a:54, 1866b:73, 1895a:158, 1897a:203; Loveridge 1933:362, 1936b:410; 1953a:365, 1957:339; Perret 1976a:18; Poynton and Broadley 1985b:131; Frost 1985:480, 2016; Ruas 1996:23; Largen 2001:331; Pickersgill 2007a:98; Channing and Baptista 2013:508; Channing et al. 2016:16); “Pungo-Andongo” [-9.66667, 15.58333] (Bocage 1895a:158; Boulenger 1905:108; Ruas 1996:23). **Kwanza Norte:** “N’dalla Tando (Dala Tando)” [-9.30000, 14.91667] (Ferreira 1903:111; Ruas 1996:23); “Ndalatando Botanical Garden” [-9.33422, 14.89895] (Channing et al. 2016:16, 66); “Zembe” [-9.350000, 14.683333] (Ferreira 1903:111; Ruas 1996:23). **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:141; Ruas 1996:23); “Congulu” [-10.86667, 14.28333] (Parker 1936:141; Ruas 1996:23). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1938:99; Ruas 1996:23); “Galanga” [-12.06667, 15.15000] (Bocage 1895a:158; Ruas 1996:23); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:141; Ruas 1996:23); “Santo-Amaro” [-12.70000, 15.85000] (Monard 1937a:43, 1938:99; Ruas 1996:23); “Cubango basin (18)” [-12.67105, 16.11111] (Conradie et al. 2016:18). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1936:128; Ruas 1996:23); “Chitau” [-11.43333, 17.15000] (Schmidt 1936:128; Ruas 1996:23; Channing et al. 2016:16); “General Machado” [-12.03333, 17.46667] (Mertens 1937a:19); “Cubango basin (11)” [-13.69413, 17.06177] (Conradie et al. 2016:18); “Cubango basin (12a)” [-13.59333, 16.87986] (Conradie et al. 2016:18.19); “Cubango basin (13)” [-13.28061, 16.74722] (Conradie et al. 2016:18); “Cubango basin (14)” [-12.87242, 16.76742] (Conradie et al. 2016:19). **Benguela:** “Benguela” [-12.58333, 13.41667] (Loveridge 1936:90; Channing et al. 2016:16); “Quibula” [-12.28333, 14.68333] (Bocage 1895a:158; Ruas 1996:23); “Quissange” [-12.43333, 14.05000] (Bocage 1887c:211, 1895a:158; Perret 1976a:18; Ruas 1996:23); “Entre-Rios” [-13.01667, 14.63333] (Hellmich 1957a:25); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:426; Ruas 1996:23). **Huíla:** “Monguaval farm”



MAP 97. Distribution of *Amietia angolensis* in Angola.

[-13.45000, 14.61667] (Poynton and Haacke 1993:14; Ruas 1996:23); “Tongrube am Jamba-Fluß” [-13.60000, 16.60000] (Hellmich 1957a:25); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:158; Perret 1976:18; Gavetti and Andreone 1993:91; Ruas 1996:23); “Kalukembé” [-13.78333, 14.68333] (Monard 1937a:43, 1938:99; Ruas 1996:23); “Sangevé” [-13.88333, 15.83333] (Monard 1937a:43, 1938:99; Ruas 1996:23); “Kuvangu” [-14.46667, 16.30000] (Monard 1937a:43, 1938:99; Ruas 1996:23); “Boca de Humpata” [-15.01667, 13.38333] (Laurent 1964a:132; Ruas 1996:23; Channing et al. 2012:318; Channing and Baptista 2013:508); “Zootecnica Station, Humapata” [-14.91417, 13.31653] (Channing et al. 2016:16, 66); “Humapata camp” [-14.95000, 13.26667] (Channing et al. 2016:16, 66); “Huila” [-15.05000, 13.55000] (Bocage 1895a:158; Themido 1941:2; Perret 1976a:18; Ruas 1996:23). **Namibe:** “Leba pass, between river and highway” [-15.07006, 13.24414] (Ceríaco et al. 2016a:20). **Cuando Cubango:** “Cubango basin (4)” [-14.81913, 17.67450] (Conradie et al. 2016:18); “Cubango basin (22d)” [-14.64991, 16.90739] (Conradie et al. 2016:18); “Cuando Cubango Province” [-14.64991, 18.4672] (Channing et al. 2016:16). **Undetermined Locality:** “without precise locality” (Bocage 1870:78); “Rio Quando” (Bocage 1895a:158; Ruas 1996:23); “areas of forest and savanna in the north and north-east of Angola” (Ceï 1977:16); “plateaus regions” (Ceï 1977:16); “arid territories along the coast” (Ceï 1977:16); “Mombola” (Channing et al. 2016:16).

Taxonomic and distributional notes: Many authors, including Poynton (1964), Drewes and Vindum (1994), and Channing and Howell (2006) recognized that there are probably several undescribed cryptic species within the enormous range of this taxon. Pickersgill (2007a) named three new species from Eastern Africa populations that were previously included within *Amietia angolensis*. Channing and Baptista (2013) and Channing et al. (2016) restricted nominal *A. angolensis* to Angolan populations, though recognized that it may occur more broadly, especially in neighboring countries for which they lacked specimens with genetic data.

Genus *Aubria* Boulenger, 1917

Aubria sp.

Rana subsigillata Duméril 1856:560. Holotype: MNHN 1566 (collector J. Aubry-Lecomte). Type locality: “Gabon” (Duméril 1856:560).

Aubria masako Ohler and Kazadi 1990:29, figs. 4, 8, 10, 12, 24. Holotype: MNHN 1989.2775 (collector M. Kazadi). Type locality: “Forêt de Masako près du village Batiabongena à 15 km du centre-ville de Kisangani sur l’ancienne route Buta (Zaire)” (Ohler and Kazadi 1990:29), [= Masako forest, near Batiabongena village, 15 km from Kisangani], Democratic Republic of Congo.

Rana (Aubria) subsigillata: Monard (1937a:47, 1938:104).

Aubria subsigillata: Ceï (1977:17), Perret (1996:96).

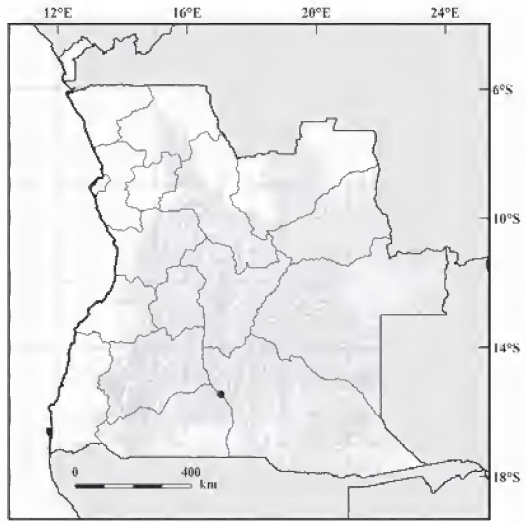
Aubria masako: Channing (2011:284), Frétey et al. (2011:42), Channing et al. (2012:329), Frost (2016).

Global distribution: *Aubria masako* and *A. subsigillata* are known from the tropical forests of central Africa, with ranges that together extend from the Atlantic coast of Cameroon and Gabon and into the Congo Basin of Democratic Republic of Congo.

Ocurrences in Angola (Map 98): Both *Aubria subsigillata* and *A. masako* have only been reported from “Kakindo (Kuvangu)” in southern Angola. **Cuando Cubango:** “Kakindo (Kuvangu)” [-14.46667, 16.30000] (Monard 1937a:47, 1938:104; Channing 2001:285).

Taxonomy and natural history notes: Monard (1937a, 1938) cited one specimen of *Aubria subsigillata* (Duméril, 1856) from “Kakindo (Kuvangu),” Angola that was identified by Gaston de Witte. This first and only record for the genus in Angola is unlikely due to the habitat, a dry savanna, and its long distance from congeneric populations in central or western Africa. Perret (1996) revisited this specimen and cited morphological differences from *A. subsigillata* in Cameroon to

suggest that it might represent a new species or even a new genus. It remains unclear whether this record indeed corresponds to *Aubria* and, if so, to which species it should be referred. The specimen cited by Monard (1937a, 1938) was recently located in the collections of the Musée d'Histoire Naturelle, La-Chaux-de-Fond, Switzerland and is presently being studied (Ceríaco et al. in prep.).



MAP 98. Distribution of *Aubria* sp. in Angola.

Genus *Pyxicephalus* Tschudi, 1838

Pyxicephalus edulis Peters, 1854

EDIBLE BULLFROG

Pyxicephalus edulis Peters 1854:626. Lectotype: ZMB 50301 (formerly part of ZMB 10056) (collector: W.C.H. Peters) designated by Scott et al. (2013:201). Type locality: restricted to “Tete,” Mozambique by Loveridge (1953:375). The original syntype series included ZMB 3349, 3350 [4 specimens from Mozambique], 10056 [2 specimens (Tete)], and 10057 [2 specimens (Sena)]. Bauer et al. (1995:49) mentioned ZMB 10058 (not located), 50260, 50290, and 50301–02, formerly included under the earlier numbers, one of these may be the BMNH specimen from “Mossambique” mentioned by Boulenger (1882:34) as “typical of *P. edulis*” and received from W. Peters. Original type locality: “Mosambique, Boror, Tete” (Peters 1854:626), [= Mozambique Island and adjacent mainland, Boror, Tete]

Rana adpersa: Bocage (1895a:157), Inger (1959:541).

Rana (Pyxicephalus) adpersus: Monard (1937a:46, 1938:103), Frade (1963:254).

Pyxicephalus adpersus: Cei (1977:17), Frost (1985:477), Channing (2001:346), du Preez and Caruthers (2009:414), Channing et al. (2012:123).

Pyxicephalus adpersus edulis: Loveridge (1950:255, 1953a:375), Parry (1982:286), Poynton and Broadley (1895b:123), Poynton and Haacke (1993:13), Ruas (1996:23).

Pyxicephalus edulis: Channing et al. (1994:154), Frétey et al. (2011:42), Scott et al. (2013:201), Frost (2016).

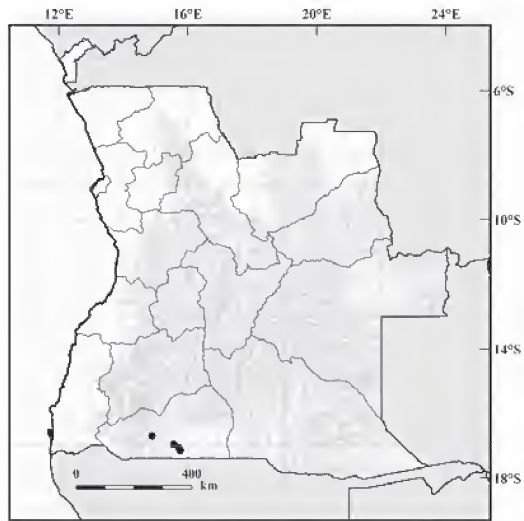
Global conservation status (IUCN): Least Concern.

Global distribution: The species is broadly distributed in sub-Saharan Africa, extending from Senegal to Kenya, and south through Mozambique, Malawi, Angola, into easternmost Namibia and northeastern South Africa.

Occurrences in Angola (Map 99): The species is known from southern Angola. **Cunene:** “Humbe” [-16.68333, 14.90000] (Bocage 1895a:157; Ruas 1996:23); “23 km NW of Pereira de Eça (Roçadas)” [-16.95000, 15.56667] (Parry 1982:286; Poynton and Haacke 1993:13; Ruas 1996:23); “Pereira de Eça” [-17.06667, 15.73333] (Poynton and Haacke 1993:13; Ruas 1996:23); “Mupanda” [-17.13333, 15.76667] (Monard 1937a:46, 1938:103; Ruas 1996:23).

Taxonomic and distributional notes: There has been on-going confusion about the taxonomy of *Pyxicephalus edulis* Peters 1854 and *P. adpersus* Tschudi 1838. The former was recognized as a subspecies of the latter by Boulenger (1882) and many subsequent authors (Loveridge 1950,

1953a; Parry 1982; Poynton and Broadley 1895b; Poynton and Haacke 1993; Ruas 1996), though Channing et al. (1994) elevated *P. edulis* based on differences in the calls and breeding biology, as well as some morphological differences (Scott et al. 2013). Channing et al. (1994) also suggested that much of the literature regarding *Pyxicephalus adspersus* should instead apply to *P. edulis*. Several authors including Channing (2001), du Preez and Caruthers (2009), and Channing et al. (2012) considered that *P. edulis* does not occur in Angola, whereas Frétey et al. (2011) considered it present there. Ceriaco et al. (in prep.) recently examined Monard's (1937a, 1938) specimens from "Mupanda" identified as *Rana* (*Pyxicephalus*) *adspersus* in the Musée d'histoire naturelle de La Chaux-de-Fonds, Switzerland and considered that these should be referred to *P. edulis* based on distinctive morphological characters.



MAP 99. Distribution of *Pyxicephalus edulis* in Angola.

Genus *Tomopterna* Duméril and Bibron, 1841

Tomopterna cryptotis (Boulenger, 1907)

TREMELO SAND FROG

Rana cryptotis Boulenger 1907b:109. Syntypes: BMNH 1947.2.1.73–78, 1947.2.28.48–5, and MCZ A-19268, exchanged from BMNH *fide* Barbour and Loveridge (1946:182) (collector Dr. W.J. Ansorge), formerly BMNH 1907.6.29.82–96. Type locality: "Catequero," "Ponang Kuma (Dongwenna)" and "Kafitu swamps" (Boulenger 1907b:109) Namibe Province, Angola.

Rana cryptotis: Barbour and Loveridge (1946:182).

Tomopterna cryptotis: Poynton and Broadley (1985b:125), Poynton and Haacke (1993:13), Frost (1985:528, 2016), Ruas (1996:23), Channing (2001:365), Largen (2001:330), Channing and Howell (2006:329), Pickersgill (2007a:118).

Tomopterna (*Tomopterna*) *cryptotis*: Frétey et al. (2011:43).

Tomopterna cryptotis: Conradie et al. (2016:19).

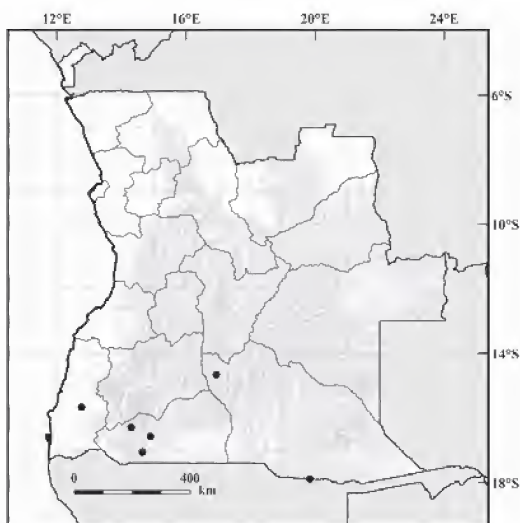
Global conservation status (IUCN): Least Concern.

Global distribution: This widespread species is found in xeric regions across much of sub-Saharan Africa.

Occurrences in Angola (Map 100): The species occurs in southwestern Angola. **Namibe:** "25 km W of Virei" [-15.66667, 12.76667] (Poynton and Haacke 1993:13; Ruas 1996:23); "Miranda" (Boulenger 1907b:109; Poynton and Haacke 1993:13; Ruas 1996:23). **Cunene:** "2 km NW of Calequero (Cahama)" [-16.28333, 14.30000] (Poynton and Haacke 1993:13); "Catequero" [-16.56667, 14.90000] (Boulenger 1907b:109; Poynton and Broadley 1985b:125; Frost 2016, 1985:528; Ruas 1996:23; Largen 2001:330); "Ponang Kuma (Dongwenna)" [-17.05000, 14.65000] (Boulenger 1907b:109; Barbour and Loveridge 1946:182; Poynton and Broadley 1985b:125; Frost 2016, 1985:528; Ruas 1996:23); "Kafitu swamps" (Boulenger 1907b:109; Poynton and Broadley 1985b:125; Frost 2016, 1985:528; Largen 2001:330). **Cuando Cubango:** "Cubango basin (22c)" [-14.65386, 16.93547] (Conradie et al. 2016:8-9,19); "Cubango basin (29)" [-17.87291, 19.83333] (Conradie et al. 2016:9-10,19).

Taxonomic and distributional notes:

Originally described based on specimens from Angola, many subsequent authors have identified populations across much of Africa as *T. cryptotis*. Recent molecular genetic analyses suggest at least some populations found far from Angola, including Somalia and Kenya, represent other distinct species (Zimkus and Larson 2011; Wasonga and Channing 2013). Because of the difficulty in identifying some species of *Tomopterna* based on morphology alone, the extent of the distribution of this species remains uncertain (Channing 2001; Channing and Howell 2006). Some records of *T. cryptotis* might refer instead to *T. tandyi*. Channing (2001) provided a map for *T. tandyi* with records from southern Angola (Pickersgill 2007a; Channing et al. 2012), between Namibe and Cunene provinces.



MAP 100. Distribution of *Tomopterna cryptotis* in Angola.

Tomopterna damarensis* Dawood and Channing, 2002*DAMARALAND SAND FROG**

Tomopterna damarensis Dawood and Channing 2002:130, figs 1, 2, 3. Holotype: TM 83913 (collector A. Channing). Type locality: “Khorixas” (Dawood and Channing 2002:133), Kunene Region, Namibia. *Tomopterna damarensis*: Frost (2016), Ceriaco et al. (2016a:20).

Global conservation status (IUCN):

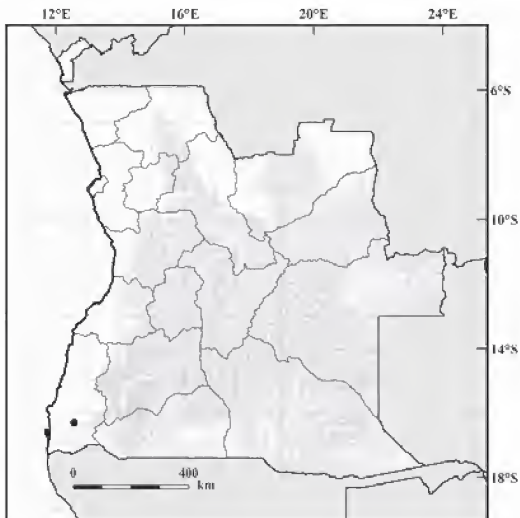
Data Deficient.

Global distribution: The species is known from southwestern Angola and northern Namibia.

Occurrences in Angola (Map 101): The species occurs in southwestern Angola. **Namibe:** “Pedita Hot springs” [-16.28462, 12.56329] (Ceriaco et al. 2016a:20).

Taxonomic and distributional notes:

Dawood and Channing (2002) suggested that this species might occur more broadly. Recently Ceriaco et al. (2016a) reported the first record for Angola from Iona Natinoal Park. Previous records of some other species of *Tomopterna*, including *T. tandyi*, might refer to this species (Heinicke et al. 2017).



MAP 101. Distribution of *Tomopterna damarensis* in Angola.

Tomopterna krugerensis* Passmore and Carruthers, 1975*KNOCKING SAND FROG**

Tomopterna krugerensis Passmore and Carruthers 1975:32, figs. 4,5,6,7, 8. Holotype: TM 44670 (collectors N.I. Passmore and V.C. Carruthers). Type locality: “Machayipan, Kruger National Park,” South Africa.

Tomopterna krugerensis: Poynton and Broadley (1985b:127), Channing (2001:368).

Tomopterna (Tomopterna) krugerensis: Frétey et al. (2011:43).

Global conservation status (IUCN): Least Concern.

Global distribution: The species occurs in savannas extending from Angola and Namibia, east through Botswana into northern South African and southern Mozambique.

Occurrences in Angola: The species occurs in southwestern Angola. **Undetermined Locality:** without precise locality (Channing 2001:369).

Taxonomic and distributional notes: This species is similar morphologically to *T. cryptotis* but has a distinct call (Poynton and Broadley 1985b) and is phylogenetically distinct (Zimkus and Larson 2011). Because of the morphological similarity, some previous reports from Angola for *T. cryptotis* might be referable to this species or *T. tandyi*. Channing (2001) presented the only records in Angola for *T. krugerensis* with mapped points in Namibe and Cunene provinces, though without specific locality details.

Tomopterna tandyi Channing and Bogart, 1996

TANDY'S SAND FROG

Tomopterna tandyi Channing and Bogart 1996:80, figs. 2, 3. Holotype: PEM A-2283 (collector M. Snyman).

Type locality: "Bedford in the Eastern Cape" (Channing and Bogart 1996:80), South Africa.

Tomopterna tandyi: Channing (2001:372), Pickersgill (2007a:117), Frétey et al. (2011:43), Channing et al. (2012:360), Frost (2016).

Global conservation status (IUCN): Least Concern.

Global distribution: The species occurs in South Africa, Namibia, and southwestern Angola.

Occurrences in Angola: The species occurs in southwestern Angola. **Undetermined Locality:** "without precise locality" (Channing 2001:369).

Taxonomic and distributional notes: A tetraploid species, likely of hybrid origin between *Tomopterna cryptotis* (Boulenger, 1907) and *Tomopterna delalandii* (Tschudi, 1838) (Channing and Bogart 1996, Frost 2016). This species is morphologically indistinguishable from *T. cryptotis* and *T. delalandii* and many records of *Tomopterna cryptotis*, including in Angola, may refer to *T. tandyi*. Channing (2001) provided a map for *T. tandyi* with records from southwestern Angola between Namibe and Cunene provinces (followed by Pickersgill 2007a, Channing et al. 2012, and Frost 2016), though without specific information.

Tomopterna tuberculosa (Boulenger, 1882)

ROUGH SAND FROG

Pyxicephalus rugosus Günther 1865a:479, pl. 33, fig. 1. Syntypes: BMNH 1947.2.29.10–11 (collector F.M.J. Welwitsch), formerly BMNH 64.7.13.5–6. Type locality: "Pungo Andongo" and "W. Africa" (Günther 1865a:479), Angola. Preoccupied by *Rana rugosa* Temminck and Schlegel, 1838.

Rana tuberculosa Boulenger 1882:30. Replacement name for *Pyxicephalus rugosus* Günther, 1865.

Rana (Tomopterna) signata Ahl "1923" 1925:43. Syntypes: ZMB 6458, 7765 [2 specimens] (donor J.V.B. Bocage). Type locality: "Huilla" [= Huila], Malanje Province, Angola. Synonymy by Laurent (1954a:72).

Rana (Tomopterna) cacondana Ahl "1923" 1925:43. Holotype: ZMB 15477 (purchased Linnea). Type locality: "Caconda," Huila Province, Angola. Synonymy by Laurent (1954a:72).

Pyxicephalus rugosus: Bocage (1870:68, 1873b:226, 1887c:211).

Rana tuberculosa Bocage (1895a:156, 1897b:211), Ferreira (1904:111), Schmidt (1936:130), Mertens (1937a:19), Schmidt and Inger (1959:36).

Rana (Tomopterna) tuberculosa: Monard (1938:102).

Pyxicephalus tuberculosus: Parker (1939:142), Haacke (1970:276).

Tomopterna signata: Ceï (1997:17).

Tomopterna rugosa: Laurent (1954a:72).

Tomopterna tuberculosa: Loveridge (1957:345), Laurent (1964a:133), Ceï (1997:17), Poynton and Broadley

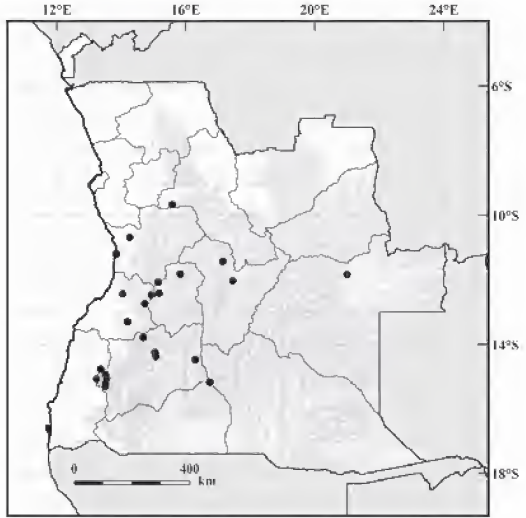
(1985b:130), Poynton and Haacke (1993:13), (1996:23), Channing (2001:372), Frost (2016).
Tomopterna (*Tomopterna*) *tuberculosa*: Frétey et al. (2011:43).

Global conservation status (IUCN): Least Concern.

Global distribution: This is a widespread species occurring in savannas extending from Angola and northwestern Namibia across southern Democratic Republic of Congo to Tanzania, Zambia, and Zimbabwe.

Occurrences in Angola (Map 102): The species occurs throughout much of Angola.

Malanje: “Pungo-Andongo” [-9.66667, 15.58333] (Günther 1865a:480, 1869:479; Boulenger 1882:30; Bocage 1895a:156; Loveridge 1957:345; Schmidt and Inger 1959:36; Poynton and Broadley 1985b:130; Ruas 1996:23). **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:142; Ruas 1996:23); “Novo Redondo” [-11.20000, 13.85000] (Ferreira 1904:111; Schmidt and Inger 1959:37; Ruas 1996:23). **Moxico:** “Réserve de Cameia (Cameia)” [-11.83333, 21.00000] (Laurent 1964a:133; Ruas 1996:23). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1936:130; Ruas 1996:23); “General Machado” [-12.03333, 17.46667] (Mertens 1937a:19). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1938:102; Ruas 1996:23); “Galanga”



MAP 102. Distribution of *Tomopterna tuberculosa* in Angola.

[-12.06667, 15.15000] (Bocage 1895a:156; Ruas 1996:23); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:142; Ruas 1996:23). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1887c:211, 1895a:156; Ruas 1996:23); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:156; Ruas 1996:23); “Ebanga” [-12.73333, 14.73333] (Monard 1938:102; Ruas 1996:23); “Hanha” [-13.30000, 14.20000] (Bocage 1897b:211; Ruas 1996:23). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:156; Ahl “1923” 1925:45; Ruas 1996:23); “Kalukembé (Caluquembe)” [-13.78333, 14.68333] (Monard 1938:102; Ruas 1996:23); “13 km N of Cutenda (Cutenda 13 km N)” [-14.25000, 15.05000] (Poynton and Haacke 1993:13; Ruas 1996:23); “7 km N of Cutenda (Cutenda 7 km N)” [-14.36667, 15.08333] (Poynton and Haacke 1993:13; Ruas 1996:23); “Kuvangu” [-14.46667, 16.30000] (Monard 1938:102; Ruas 1996:23); “Huilla” [-15.05000, 13.55000] (Bocage 1873b:226, 1895a:156; Ahl “1923” 1925:45; Ruas 1996:23); “7 km SE of Jau (Jau 7 km)” [-15.21667, 13.51667] (Poynton and Haacke 1993:13); “Cascade de Ongueria (Chibia)” [-15.30000, 13.51667] (Laurent 1954a:72; Ruas 1996:23); “Christo Rei (Cristo Rei)” [-14.93333, 13.51667] (Poynton and Haacke 1993:13; Ruas 1996:23). **Cunene:** “riusseau Mbalé (Bale)” [-15.16667, 16.75000] (Monard 1938:102; Ruas 1996:23). **Namibe:** “Biballa (Bibala)” [-14.76667, 13.36667] (Bocage 1895a:156; Ruas 1996:23); “Bottom of Leba Pass (Leba)” [-15.06667, 13.23333] (Poynton and Haacke 1993:13; Ruas 1996:23). **Undetermined Locality:** without precise locality (Bocage 1870:68).

Taxonomic and distributional notes: The nomen *Pyxicephalus rugosus* was preoccupied and was replaced by *Rana tuberculosa* Boulenger, 1882. Ahl (1925 “1923”) described two new species of *Tomopterna* based on Angolan types, which Laurent (1954a) subsequently treated as junior synonyms of what is now *T. tuberculosa*.

Family Dicroglossidae Anderson, 1871

Genus *Hoplobatrachus* Peters, 1863

Hoplobatrachus occipitalis (Günther, 1858)

AFRICAN CROWNED BULLFROG

Rana occipitalis Günther 1858a:320. Syntypes: BMNH 1853.2.21.4, 1858.11.25.99–102, -112–113, 1932.11.1.1–2 [12 specimens] (collector unknown). One of the type specimens is depicted in Günther “1858b” 1859:130, pl. 11. Type locality: “West-Afrika” (Günther 1858a:320).

Rana bragantina Bocage (1864:254). Holotype: MBL (collector F.A.P. Bayão), not located by Perret (1967a:19), possibly lost or destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” (Bocage 1864:254) [= Calandula], Malanje Province, Angola.

Rana occipitalis: Bocage (1866a:53, 1870:68, 1895a:155), Boulenger (1882:27), Mertens (1938a:426), Themido (1941:2), Loveridge (1957:344), Gavetti and Andreone (1993:98), Frost (1985:508).

Dicroglossus occipitalis: Laurent (1950a:14, 1954a:71), Hellmich (1957a:24), Perret (1976a:19), Cei (1977:16).

Euphlyctis occipitalis: Poynton and Broadley (1985b:125), (1996:23).

Hoplobatrachus occipitalis: Channing (2001:295), Frétey et al. (2011:37), Channing et al. (2012:166), Frost (2016).

Global conservation status (IUCN): Least Concern.

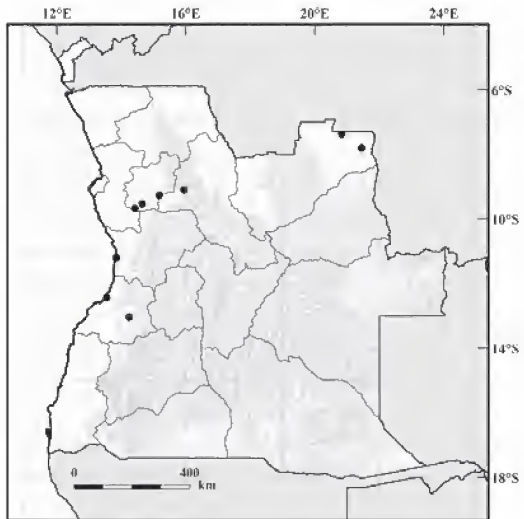
Global distribution: The species is known from most of sub-Saharan Africa.

Occurrences in Angola (Map 103): The species known from northern and western Angola, though probably occurs more widely.

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1954a:71); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:14, 1954a:71; Ruas 1996:23); “Muita, Luembe E, dans la vallée marécageuse de la Kasseke (affluente de la Muita)” [-7.80000, 21.45000] (Laurent 1950:14; Ruas 1996:23). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1864:254, 1866a:53, 1895a:155; Perret 1976a:19; Ruas 1996:23). **Kwanza Norte:** “Ambaca” [-9.26667, 15.18333] (Bocage 1895a:155; Ruas 1996:23); “Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:24); “Dondo, sur le bord droit du Quanza” [-9.68333, 14.43333] (Bocage 1895a:155; Ruas 1996:23). **Kwanza Sul:** “Novo Redondo” [-11.20000, 13.85000] (Bocage 1895a:155; Ruas 1996:23).

Benguela: “Catumbella” [-12.43333, 13.55000] (Bocage, 1895a:155; Themido 1941:2; Gavetti and Andreone 1993:98; Ruas 1996:23); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:426; Ruas 1996:23). **Undetermined Locality:** without precise locality (Bocage 1870:68; Laurent 1954a:71); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16).

Taxonomic and distributional notes: When publishing the description of *R. bragantina*, Bocage (1864) was unaware of Günther’s (1858) *R. occipitalis*, but quickly recognized this and synonymized the two shortly thereafter (Bocage 1866a).



MAP 103. Distribution of *Hoplobatrachus occipitalis* in Angola.

Family Ranidae Batsch, 1796**Genus *Amnirana* Dubois, 1992*****Amnirana albolabris* (Hallowell, 1856)****WHITE-LIPPED FROG**

Rana albolabris Hallowell 1856:153. Syntypes: ANSP [4 specimens], lost *fide* J.L. Perret in Frost (1985:479) (collector P. du Chaillu). Type locality: “W. Africa” (Hallowell 1856:153), restricted to “Gabon” by Perret (1977:843).

Limnodytes albolabris: Peters (1877a:618).

Rana albolabris: Bocage (1895a:162).

Hylarana albolabris albolabris: Laurent (1950a:14, 1954a:74), Loveridge (1957:338).

Hylarana albolabris: Perret (1977:843), Ruas (1996:24).

Amnirana albolabris: Channing and Howell (2006:256), Channing et al. (2012:360), Frost (2016), Jongsma et al. (2018:275).

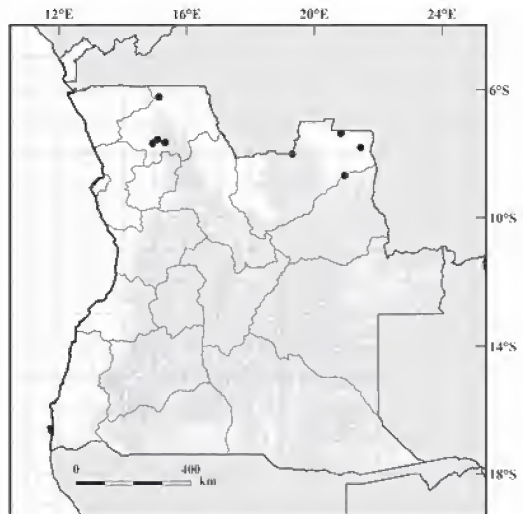
Rana (Amnirana) albolabris: Frétey et al. (2011:43).

Global conservation status (IUCN): Least Concern.

Global distribution: The wide-ranging forest species found across western and Central Africa likely represents multiple species, each with more restricted distributions.

Ocurrences in Angola (Map 104): The species occurs in northern Angola and in the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:618; Bocage 1895a:162). **Uíge:** “Uíge, University Kimpa Vita campus” [-8.607967, 20.968804] (Jongsma et al. 2018:275); “Serra do Pingano” [-7.68528, 14.92956] (Jongsma et al. 2018:275); “Negage” [-7.7625, 15.285] (Jongsma et al. 2018:275); “Uíge fish farm, Kibokolo” [-6.274417, 15.067472] (Jongsma et al. 2018:275). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:14, 1954a:74; Ruas 1996:24); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:14; Ruas 1996:24); “rive de la Tshihumbe, 40 km à l’est de Dundo (Rio Chiumbe)” [-8.01667, 19.31667] (Laurent 1950a:14; Ruas 1996:24); “Tshinguvu, galerie forestière de la Tshikapa, 50 km au sub-ouest de Dundo (Chingufo)” [-8.01667, 19.31667] (Laurent 1950a:14; Ruas 1996:24); “Sombo” [-8.68333, 20.95000] (Laurent 1954a:74; Ruas 1996:24).

Taxonomic and distributional notes: Perret (1977) restricted the distribution of this species to the forested area of Cameroon and Congo (Channing and Howell 2006). Laurent (1964a) was uncertain whether his Angolan material corresponded to *A. albolabris* or instead to *A. lemairei* (Laurent 1950a, 1954a). Jongsma et al. (2018) included Angolan populations in their molecular phylogenetic analyses and found that these fell within a large complex of likely cryptic species all currently referred to as *A. albolabris*.



MAP 104. Distribution of *Amnirana albolabris* in Angola.

Amnirana darlingi* (Boulenger, 1902)*DARLING'S WHITE-LIPPED FROG**

Rana darlingi Boulenger 1902:15. Syntypes: BMNH 1947.2.2.67–68 (collector J. ffolliott Darling), formerly

BMNH 1902.2.12.114–115" before period. Type locality: "Mazöe and between Umtali and Marandellas" [= Mashonaland], Zimbabwe.

Rana albolabris adiscifera Schmidt and Inger (1959:48). Holotype: FMNH 21171 (collector R. Boulton). Type locality: "Chitau", Angola.

Rana (Rana) darlingi: Monard (1937a:44, 1938:100).

Rana albolabris: Schmidt (1936:130).

Rana albolabris adiscifera: Marx (1976:62).

Rana darlingi: Frade (1963:254), Laurent (1964a:132), Cei (1977:16).

Hylarana darlingi: Poynton and Broadley (1985b:139), Ruas (1996:24, 2002:143), du Preez and Carruthers (2009:452).

Amnirana darlingi: Channing (2001:266), Channing et al. (2012:364), Frost (2016), Conradie et al. (2016:19), Jongsma et al. (2018:275).

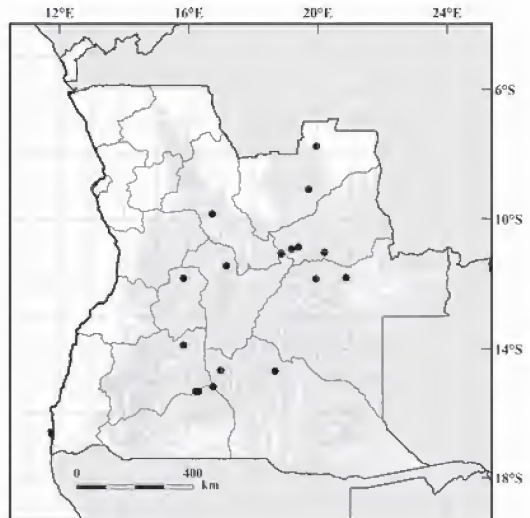
Rana (Amnirana) darlingi: Frétey et al. (2011:43).

Hylarana cf. darlingi: Ceriaco et al. (2016b:49).

Global conservation status (IUCN): Least Concern.

Global distribution: The species occurs in south-central Africa, extending from Angola through the Democratic Republic of Congo, Zambia, Malawi, Zimbabwe, and parts of Botswana and Mozambique.

Ocurrences in Angola (Map 105): The species occurs especially in the eastern regions of Angola. **Malanje:** "Cangandala National Park" [-9.84606, 16.72233] (Ceriaco et al. 2016b:25). **Lunda Norte:** "Poste de Luangue, humidiherbosa du ruisseau Katcheleka, affl. W. Luangue, entre le Lunguena et le Tchá-Pemba (Posto do Luangue)" [-9.08333, 19.71667] (Laurent 1964a:132; Ruas 1996:24); "Lagoa Carumbo" [-7.738333, 19.9833] (Jongsma et al. 2018: 275)". **Lunda Sul:** "Dala" [-11.03333, 20.20000] (Monard 1937a:44, 1938:100; Ruas 1996:24); "Alto Chicapa, sources du Cuílo (Rio Cuílo)" [-10.86667, 19.40000] (Laurent 1964a:132; Ruas 1996:24); "mare des rives Kutele, affl. rive droite du Cuango, Alto Chicapa (Rio Cutele)" [-11.06667, 18.86667] (Laurent 1964a:132; Ruas 1996:24); "sources du Tchimboma, Alto Chicapa (Rio Chimboma)" [-10.93333, 19.18333] (Laurent 1964a:132; Ruas 1996:24). **Moxico:** "Rives du lac Calundo (Lago Calundo)" [-11.80000, 20.86667] (Laurent 1964a:132; Ruas 1996:24); "Rio, Calombe, Reserva da Palanca Preta" [-11.83333, 19.93333] (Ruas 2002:143); "Calombe, Luso" [-11.83333, 19.93333] (Ruas 1996:24, 2002:143). **Bié:** "Chitau" [-11.43333, 17.15000] (Schmidt 1936:130; Schmidt and Inger 1959:48; Marx 1976:62; Ruas 1996:24). **Huambo:** "Bimbi" [-11.81667, 15.83333] (Monard 1937a:44, 1938:100; Ruas 1996:24). **Huíla:** "Sangevé" [-13.88333, 15.83333] (Monard 1937a:44, 1938:100; Ruas 1996:24); "Kuvangu" [-14.46667, 16.30000] (Monard 1937a:44, 1938:100; Ruas 1996:24); "Kambisa" [-15.31667, 16.21667] (Monard 1937a:44, 1938:100; Ruas 1996:24). **Cunene:** "ruisseau Mbalé (Bale)" [-15.16667, 16.75000] (Monard 1937a:44, 1938:100; Ruas 1996:24). **Cuando Cubango:** "Cubango basin (22a)" [-14.66622, 16.97842] (Conradie et al. 2016:19); "Cuito basin (55)" [-14.68478, 18.67369] (Conradie et al. 2016:19). **Undetermined Locality:** "Zambeian



MAP 105. Distribution of *Amnirana darlingi* in Angola.

highlands” (Frade 1963:254); “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16).

Taxonomic and distributional notes: Laurent (1964a) synonymized *Rana albolabris adiscifera* with *Rana darlingi*.

Amnirana lemairei (de Witte, 1921)

LEMAIRE’S WHITE-LIPPED FROG

Rana Lemairei de Witte 1921:1, pl. 1, fig. 1-4. Holotype: MRAC 172 (collector Mission Lemaire). Type locality: “Loföi (Katanga)” (de Witte 1921:3), Democratic Republic of Congo.

Hylarana albolabris lemairei: Laurent (1964a:133), Cei (1977:16)

Hylarana lemairei: Poynton and Broadley (1985b:140), Ruas (1996:24, 2002:143), Channing et al. (2012:365).

Amnirana lemairei: Channing (2001:269), Frost (2016).

Rana (Amnirana) lemairei: Frétey et al. (2011:43).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from northeastern Angola, the southern Democratic Republic of Congo, and western Zambia.

Occurrences in Angola (Map 106): The species occurs in northeastern Angola. **Lunda Norte:** “rives du Luachimo, Dundo (Luachimo)” [-7.38333, 20.85000] (Laurent 1964a:133; Ruas 1996:24); “Riv. Chitato, Dundo (Rio Chitado)” (Laurent 1964a:133; Ruas 1996:24). **Lunda Sul:** “Alto Cuílo, dans l’eau, très basse, des sources d’un ruisseau (Alto Cuílo)” [-10.01667, 19.55000] (Laurent 1964a:133; Ruas 1996:24); “Chutes du Cuan-gu-Muqué, Alto Chicapa (Rio Cuango-Muqué, quedas)” [-10.76667, 19.20000] (Laurent 1964a:133; Ruas 1996:24); “sources de la Tchimboma, affl. gauche du Cuango-Muqué, Alto Chicapa (Rio Chimboma, nascente)” [-10.93333, 19.18333] (Laurent 1964a:133; Ruas 1996:24). **Moxico:** “Lumeje I, galerie forestière isolée à côté de la route, près de l’entrée de la réserve de chasse de Cameia (Rio Lumege)” [-11.58333, 21.00000] (Laurent 1964a:133; Ruas 1996:24); “Lago Cameia” [-11.71667, 20.80000] (Ruas 1996:24). **Undetermined Locality:** “areas of forest and savanna in the north and northeast of Angola” (Cei 1977:16).

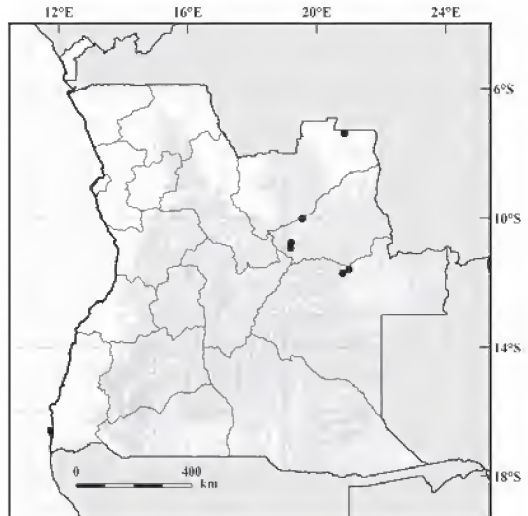
Taxonomic and distributional notes: This taxon was discussed by Schmidt and Inger (1959) as a subspecies of *Rana albolabris* (Hallowell, 1856). Laurent (1964a) identified some individuals as *Rana albolabris lemairei*, and Perret (1977) later recognized this as a full species, although he expressed some doubts about its occurrence in Angola.

Amnirana lepus (Andersson, 1903)

ANDERSSON’S WHITE-LIPPED FROG

Chiromantis lepus Andersson 1903: 142. Holotype: NHR ? (collector Y. Sjöstedt). Type locality: “Kamerun,” [=Cameroon].

Amnirana lepus: Jongsma et al. (2018:275).



MAP 106. Distribution of *Amnirana lemairei* in Angola.

Global conservation status (IUCN):

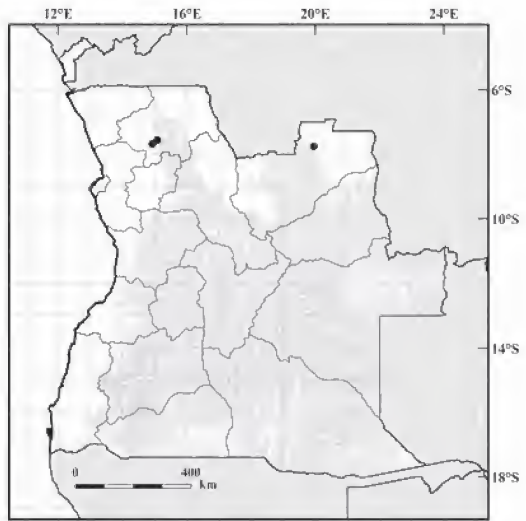
Least Concern.

Global distribution: The species occurs from Cameroon south to northern Angola and east through the central Democratic Republic of Congo.

Occurrences in Angola (Map 107): The species occurs in the northern regions of the country. **Uíge:** “Serra Pingano” [-7.68528, 14.92956] (Jongsma et al. 2018:275); “Quilomboço” [-7.642333, 15.005722]. **Lunda Norte:** “Carumbo” [-7.752722, 19.95642] (Jongsma et al. 2018:275).

Taxonomic and distributional notes:

Jongsma et al. (2018) recently published the only reported records for this species in Angola based on comparisons of genetic data to specimens of *A. lepus* from throughout its range. The relationship between *A. lepus* and the similar Angolan endemic species *A. parkeriana* requires further research.



MAP 107. Distribution of *Amnirana lepus* in Angola.

Amnirana parkeriana* (Mertens, 1938)*PARKER’S WHITE-LIPPED FROG (Endemic)**

Rana albolabris acutirostris Parker (1936:141). Holotype: BMNH 1936.8.1.1, currently BMNH 1947.2.3.69. (collector K. Jordan). Type locality: “Congulu” [= Congulo] Kwanza Sul, Angola. Preoccupied by *Rana fusca acutirostris* Fatio, 1872.

Rana albolabris parkeriana: Mertens (1938b:14), Loveridge (1941a).

Rana albolabris acutirostris: Barbour and Loveridge (1946:181).

Rana parkeriana: Perret (1977:844), Frost (1985:509).

Hylarana parkeriana: Ruas (1996:24).

Amnirana parkeriana: Channing (2001:270), Frost (2016).

Rana (*Amnirana*) *parkeriana*: Frétey et al. (2011:43).

Global conservation status (IUCN):

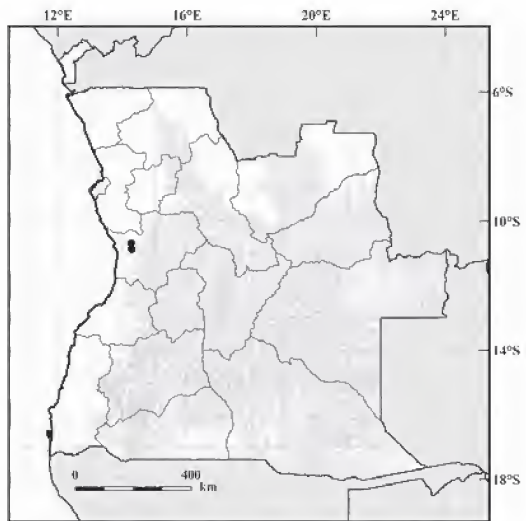
Data Deficient.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 108): The species is known only from a small area on the western escarpment of Angola. **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:141; Barbour and Loveridge 1946:181; Ruas 1996:24); “Congulu” [-10.86667, 14.28333] (Parker 1936:141; Frost 1985:509; Ruas 1996:24).

Taxonomic and distributional notes:

Parker (1936) described this species as *Rana*



MAP 108. Distribution of *Amnirana parkeriana* in Angola.

albolabris acutirostris based on a single specimen from “Congulu” and four from “Quirimbo.” As the name was preoccupied, Mertens (1938b) provided the replacement name *Rana albolabris parkeriana* (Loveridge 1941a; Barbour and Loveridge 1946; Perret 1977). There have been no new records since the description of this species and its distinction from other large-bodied species of *Amnirana*, such as *A. lepus*, remains in doubt.

Family Rhacophoridae Hoffman, 1932 (1858)

Genus *Chiromantis* Peters, 1854

Chiromantis xerampelina Peters, 1854

GREY FOAM-NEST TREEFROG

Chiromantis xerampelina Peters (1854:627). Syntypes: ZMB 6593, 6594 [4 specimens] (collector W.C.H. Peters) *fide* Bauer et al. (1995:50). Type locality: “Tette und Sena” Mozambique.

Chiromantis xerampelina: Schiøtz (1999:38), Channing (2001:375), Pickersgill (2007a:296), Frétey et al. (2011:43), Frost (2016).

Global conservation status (IUCN):

Least Concern.

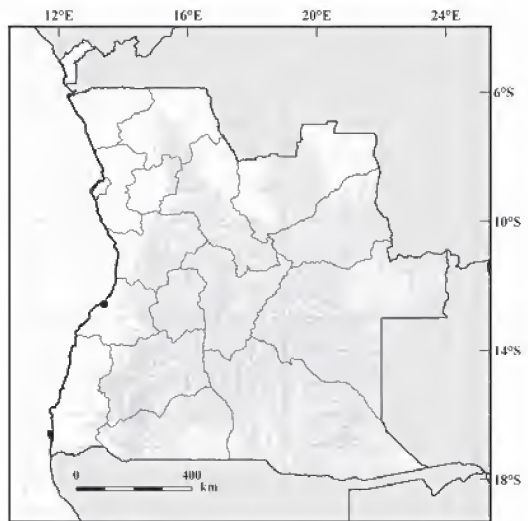
Global distribution: The widespread species occurs in savannas of eastern and central Africa, extending into northeastern South Africa.

Ocurrences in Angola (Map 109): The species is known from southwestern Angola.

Benguela: “Benguela” (Schiøtz 1999:39; Channing 2001:376).

Taxonomic and distributional notes:

Schiøtz (1999) and Channing (2001) provided maps with a record of this species in Benguela Province, though without information about the locality; Frétey et al. (2011) also listed this species as occurring in Angola.



MAP 109. Distribution of *Chiromantis xerampelina* in Angola.

REPTILIA

Order CHELONII Brongniart, 1800

Family Pelomedusidae Cope, 1868

Genus *Pelomedusa* Wagler, 1830

Pelomedusa subrufa (Bonnaterre, 1789)

HELMETED TERRAPIN

Testudo Subrufa Bonnaterre 1789:28; pl. 6, fig. 5. Holotype: MNHN 7970 (collector P. Commerson, see Notes below) *fide* Bour (1982:533). Type locality: “Les grandes Indes” [= India] (Bonnaterre 1789:28), in error, corrected by Mertens (1937b:141) to “Kap der Guten Hoffnung,” South Africa, and later by Bour (1982:535) to “Taolañaro (Fort-Dauphin), République Malagasy (Madagascar)” [= Tolanaro], Madagascar.

Pentonyx Gehafie: Bocage (1870:68).

Pelomedusa galeata: Bocage (1887b:202, 1895a:5), Mertens (1937b:152), Schimdt (1933:3), Monard (1937b:147).

Pelomedusa subrufa subrufa: Loveridge (1941b:470), Bour (1982:533).

Pelomedusa subrufa: Iverson (1986:236, 1992:52), Boycott and Bourquin (2008:007.1), Turtle Taxonomy Working Group (2014:435), Petzold et al. (2014:542), Ceriaco et al. (2016a:54), Conradie et al. (2016:26).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is distributed from the subtropical savannas and semi-desert regions in Angola, Namibia, Botswana, Zimbabwe, Zambia, Malawi, the southeastern Democratic Republic of Congo, parts of Mozambique, and portions of northeastern South Africa. It has also been introduced to Madagascar.

Occurrences in Angola (Map 110): This species has been confirmed from numerous localities across southern and central Angola.

Malanje: “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1895a:5; Monard 1937b:146; Loveridge 1941b:479). **Bié:**

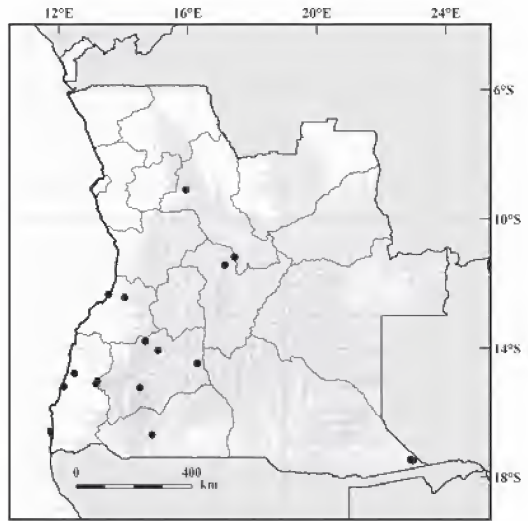
“Gauca” [-11.18333, 17.45000] (Schmidt 1933:3; Loveridge 1941b:479); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:3; Loveridge 1941b:479). **Benguela:**

“Quissange” [-12.43333, 14.05000] (Bocage 1895a:5; Monard 1937b:146; Loveridge 1941b:479); “Catumbella-Mündung, Benguella” [-12.33333, 13.55000] (Mertens 1926:152). **Huíla:**

“Kalukembé” [-13.78333, 14.68333] (Monard 1937b:147; Loveridge 1941b:479); “Quillengues” [-14.06667, 15.08333] (Bocage 1895a:5; 1937b:146; Loveridge 1941b:479);

“sur les bords du Kuvangu, au sud de Vila-da-Ponte (Kuvangu river S. Vila da Ponte)” [-14.46667, 16.30000] (Monard 1937b:147; Loveridge 1941b:479); “Huila District” [-15.24179, 14.52210] (Petzold et al. 2014, supplemental information); “Kahuihui” [Undetermined Locality] (Monard 1937b:147; Loveridge 1941b:479); “Kalundunga” [Undetermined Locality] (Monard 1937b:147; Loveridge 1941b:479). **Namibe:** “Mucungu” [-14.78333, 12.48333] (Schmidt 1933:3; Loveridge 1941b:479; Ceriaco et al. 2016a:54); “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:5; Monard 1937b:146; Loveridge 1941b:479; Ceriaco et al. 2016a:54); “Capangombe” [-15.10000, 13.15000] (Bocage 1887b:202; 1895a:5; Monard 1937b:146; Loveridge 1941b:479; Ceriaco et al. 2016a:54); “Mossamedes” [-15.20000, 12.15000] (Bocage 1887b:202; 1895:5; Loveridge 1941b:479; Ceriaco et al. 2016b:54). **Cunene:** “Humbe” [-16.68333, 14.90000] (Bocage 1895a:5; 1937b:146; Loveridge 1941b:479). **Cuando Cubango:** “23 km E Jamba” [-17.48690, 22.98790] (Petzold et al. 2014, supplemental information); “Cuando basin (40)” [-17.45786, 22.91191] (Conradie et al. 2016:9-10, 26).

Taxonomic and distributional notes: This species was first described by Lacépède (1788) as *Testudo subrufa*, but following the ICZN ruling that this was an unavailable non-binominal work (ICZN 2005, Opinion 2104, Case 3226), authorship has been attributed to Bonnaterre (1789). Mertens (1937b) and Loveridge (1941b) demonstrated that *T. subrufa* pre-dated *T. galeata*, until then widely employed as the name for the helmeted terrapin. As the collector named by Lacépède, Pierre Sonnerat, was known to have collected in the southwestern Cape region of South Africa, Mertens (1937b) restricted the type locality to this area. However, Bour (1982) presented evidence that the type was probably actually collected by Philibert Commerson in Madagascar in 1770 (see review in Fritz et al. 2014). Loveridge (1941b) cited several species and subspecies for



MAP 110. Distribution of *Pelomedusa subrufa* in Angola.

Pelomedusa, but subsequently *P. subrufa* was long treated as monotypic (e.g., Gasperetti et al. 1993; Fritz and Havas 2007; Turtle Taxonomy Working Group 2007; Boycott and Bourquin 2008). However, Vargas-Ramírez et al. (2010) identified several species-level lineages within *P. subrufa*. Petzold et al. (2014) have formally resurrected several species from synonymy and have described additional species corresponding to the lineages identified genetically. The populations in Angola belong to the same taxon as the Madagascan type of *P. subrufa*, which represents a population introduced from the mainland of Africa (Vargas-Ramírez et al. 2010; Wong et al. 2010). Iverson (1986, 1992) and The Turtle Taxonomy Working Group (2007, 2014, 2017) presented point local-ity distribution maps for the species.

Genus *Pelusios* Wagler, 1830

Pelusios bechuanicus FitzSimons, 1932

OKAVANGO MUD TURTLE

Pelusios bechuanicus FitzSimons 1932:37. Holotype: TM 14688 *fide* Broadley (1981a:664) and Mashini and Mahlangu (2014:184) (collector V.F. FitzSimons). Type locality: “Thamalakane River at Maun, Ngamiland, Bechuanaland,” [Botswana].

Sternotherus nigricans: Monard (1931:109, 1937b:148).

Pelusios bechuanicus: Laurent (1964a:27), Iverson (1986:239, 1992:57), Fritz and Havaš 2007:346, Turtle Taxonomy Working Group (2014:436), Conradie et al. (2016:27).

Pelusios bechuanicus bechuanicus: Broadley (1981a:664).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is limited to the greater Okavango basin, from the Cuban-go/Okavango River in the west to the Kafue Flats in Zambia and south to northeastern Namibia and northern Botswana.

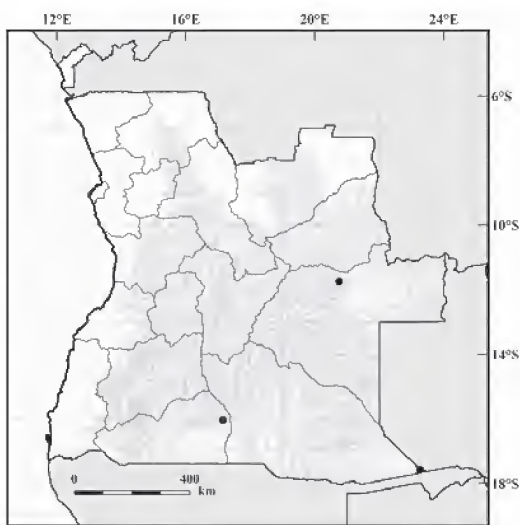
Occurrences in Angola (Map 111): This species occurs in central-southeastern Angola.

Moxico: “Riv. Chonga, afl. de la Lumeje, 100 km à l’est de Luso” [-11.75000, 20.75000] (Laurent 1964a:27; Broadley 1981a:666).

Cunene: “Chimporo” [-16.03333, 17.15000] (Monard 1931:109, 1937b:148; Broadley 1981a:666). **Quando Cubango:** “flood waters of the lower Cuando River (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:90-10, 27).

Taxonomic and distributional notes:

FitzSimons (1932) short description was supplemented by a more extensive and illustrated version (FitzSimons 1935). Laurent (1964a) resurrected *Pelusios bechuanicus* from the synonymy of *Pelusios subniger* (Bonnaterre, 1789) based on a single Angolan specimen from Moxico Province, and subsequently Broadley (1981a) allocated *Sternotherus nigricans* (non Donndoff, 1798) from “Chimporo” (Monard 1931, 1937b) to this species as well. Iverson (1986, 1992) provided a distribution map with two records from Angola, which correspond to the “Chimporo” and “Chonga River” records listed above.



MAP 111. Distribution of *Pelusios bechuanicus* in Angola.

Pelusios castaneus* (Schweigger, 1812)*WEST AFRICAN MUD TURTLE**

Emys castanea Schweigger 1812:314. Holotype: MNHN specimen lost *vide* Bour (1978 “1979”) (collector unknown); Neotype: MNHN 2008.0303 (collector Fouchard-Togamin), designated by Bour (2008). Type locality: “Patria ignota” [unknown]; Neotype locality: “vicinity of Koutchatcha (7°20' N, 1°18' E), a village close to the Amou River (ca. 30 km East of Gléfi), Ogou Prefecture, Plateaux Region, Togo.”

Sternothaerus derbianus: Peters (1877a:611), Frade (1963:252).

Sternothaerus Derbianus: Bocage (1895a:3).

Pelusios subniger: Loveridge (1941b:491, 1957:175).

Pelusios castaneus: Iverson (1986:241, 1992:60), Fritz and Havaš 2007:346, Kindler et al. (2016:305), Bour et al. (2016:095.1).

Pelusios castaneus castaneus: Turtle Taxonomy Working Group (2014:436); Bour et al. (2016:095.3).

Global conservation status (IUCN): Not Evaluated.

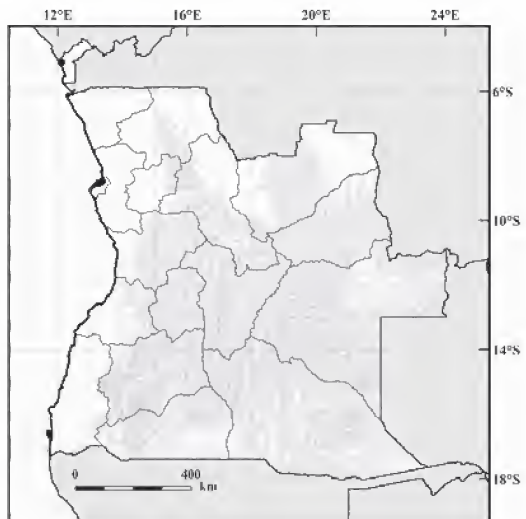
Global distribution: The species is known from West Africa, from Senegal east through extreme southern Chad and the adjacent Central African Republic. A southern population occurring in near-coastal localities from Gabon to northern Angola is disjunct from the main distribution. Introduced populations occur on São Tomé and on Guadeloupe (but not on the Cape Verde Islands as previously noted; see Bour et al. 2016).

Occurrences in Angola (Map 112): This species occurs along the coast in the northwest from southern Bengo Province north to Cabinda. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:611; Loveridge 1941b:501). **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1895a:3; Loveridge 1941b:501); “Cacuaco, 10 km NE Luanda” [-8.78333, 13.36667] (Bour et al. 2016:095.3).

Taxonomic and distributional notes:

One non-nominate subspecies has been recognized, the extinct *P. c. seychellensis* (Siebenrock, 1906) (Turtle Taxonomy Working Group 2014; Bour et al. 2016), although molecular evidence suggests that it should be considered a junior synonym of the nominate form (Stuckas et al. 2013; Kindler et al. 2016).

Loveridge (1941b) considered *Sternothaerus derbianus* as used by Peters (1877a) and Bocage (1895a) as a synonym of *Pelusios subniger* (Lacépède, 1789). Laurent (1956) revived *P. derbianus* and *P. rhodesianus* Hewitt, 1927 as races of *Pelusios castaneus* (Schweigger, 1812) although Bour (1978 “1979”) applied the name *P. castaneus castaneus* to the West African form, with *derbianus* as a synonym (Broadley 1981a). Bour et al. (2016) mapped several additional localities in Angola, all from near-coastal sites in Luanda and Bengo provinces, although place names were not given.



MAP 112. Distribution of *Pelusios castaneus* in Angola.

Pelusios chapini* Laurent, 1965*CENTRAL AFRICAN MUD TURTLE**

Pelusios castaneus chapini Laurent 1965:21, pl. 3, figs. 1–4. Holotype: MRAC 20937 (collector R.F. Laurent). Type locality: “Kasenyi, Lake Albert, Bunia Terr., Ituri, Congo” [= Lake Albert, Kasenyi, Ituri Province], Democratic Republic of Congo.

Pelusios chapini: Turtle Taxonomy Working Group (2014:437), Kindler et al. (2016:305).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Central Africa, from the Central African Republic to the northern Democratic Republic of Congo and much of the lower Congo drainage, Congo, Gabon and presumably northern Angola (possibly including the Cabinda enclave).

Occurrences in Angola: This species may occur in the far northwest of the country, although there are no previously published specimen records from Angola.

Taxonomic and distributional notes: According to the Turtle Taxonomy Working Group (2014) and the recent study provided by Kindler et al. (2016), it is expected that *Pelusios chapini* occurs in Cabinda and might reach the extreme northwest border of the country in Zaire and/or Uíge provinces. The species is closely related to *P. castaneus* and some introgression may have occurred between the two taxa (Fritz et al. 2011; Kindler et al. 2016).

Pelusios gabonensis (Duméril, 1856)

AFRICAN FOREST TURTLE

Pentonyx gabonensis Duméril 1856:373, pl. 13, figs. 2, 2a. Holotype: MNHN 4237 (collector M. Aubry). Type locality: “Gabon.”

Sternotherus gabonensis: Bocage (1866a:40, 1866b:57).

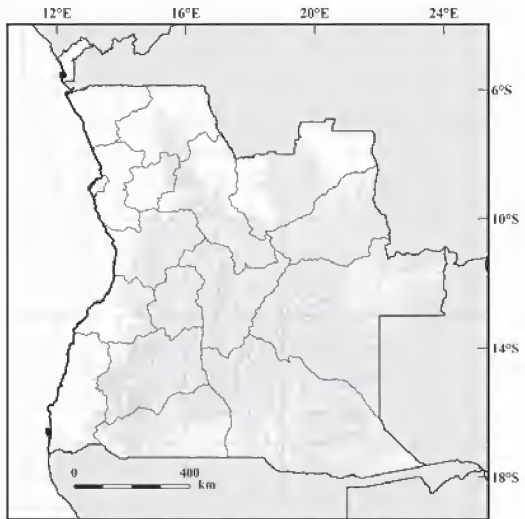
Pelusios gabonensis: Loveridge (1941b:485), Iverson (1986:244, 1992:63), Fritz and Havaš 2007:348, Turtle Taxonomy Working Group (2014:438), Kindler et al. (2016:305).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from forested areas of Central Africa from Cameroon east across most of the central and northern portions of the Democratic Republic of Congo to far western Uganda, Tanzania and Burundi and southwest to Angola. A disjunct population occurs in Liberia and the Ivory Coast.

Occurrences in Angola (Map 113): This species occurs in northern Angola. **Cabinda:** “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:40, 1866b:57).

Taxonomic and distributional notes: According to Loveridge (1941b), Iverson (1986, 1992) and The Turtle Taxonomy Working Group (2014), the species is only known from Angola in Cabinda and Zaire provinces, although The Turtle Taxonomy Working Group (2017) provided an additional record from Lunda Norte.



MAP 113. Distribution of *Pelusios gabonensis* in Angola.

Pelusios nanus Laurent, 1956

AFRICAN DWARF MUD TURTLE

Pelusios nanus Laurent 1956:31, pl. IV, figs. 2–4. Holotype, MRAC 7833 (collector G. de Witte). Type locality: “Dilolo, Haut Lualaba,” Lualaba Province, Democratic Republic of Congo.

Pelusios derbianus: Schmidt (1933:3).

Sternotherus nigricans: Monard (1937b:148).

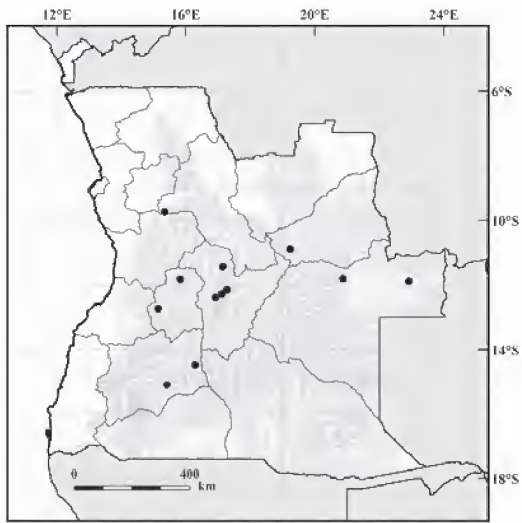
Pelusios rhodesianus: Loveridge (1941b:491).

Pelusios nanus: Laurent (1964a:25, 1965:27), Broadley (1981a:657), Iverson (1986:245, 1992:64), Fritz and Havaš 2007:348, Ceriaco et al. (2014b:670), Turtle Taxonomy Working Group (2014:438), Kindler et al. (2016:305).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species has a relatively limited distribution across central Angola, northern Zambia and the southern Democratic Republic of Congo.

Ocurrences in Angola (Map 114): This species occurs in central Angola. **Malanje:** “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:670). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:25, 1965:27; Broadley 1981:661). **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:25; Broadley 1981a:661); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:25; Broadley 1981a:661). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:3); “Catabola, Rio Cunhinga basin” [-12.144732, 17.280407] (Kindler et al. 2016, supplemental material:5); “river between Kuito asnd Catabola” [-12.267883, 17.114582] (Kindler et al. 2016, supplemental material:5); “Kuito” [-12.383599, 16.928029] (Kindler et al. 2016, supplemental material:5). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:148; Loveridge 1941b 501); “Elendé” [-12.73333, 15.15000] (Monard 1937b:148; Loveridge 1941b 501). **Huíla:** “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:148; Broadley 1981a:661); “Osi” [-15.08333, 15.41667] (Monard 1937b:148; Loveridge 1941b 501).



MAP 114. Distribution of *Pelusios nanus* in Angola.

Taxonomic and distributional notes: Wermuth and Mertens (1977) considered *Pelusios nanus* as a subspecies of *Pelusios adansoni* (Schweigger, 1812). However, according to Broadley (1981a), the two species are highly divergent geographically and phylogenetically. Loveridge (1941b) considered specimens referred to *Sternotherus nigricans* by Monard (1937b) to be *Pelusios rhodesianus* Hewitt, 1927, however, according to Broadley (1981a) these specimens and those allocated to *Pelusios derbianus* by Schmidt (1933) are *P. nanus*. Iverson (1986, 1992) presented a distribution map for the species although he did not provided information about the localities plotted. Iverson's map agrees with ours, as well as that of the Turtle Taxonomy Working Group (2014). The recent records from Capanda, Malanje Province (Ceriaco et al. 2014b) extend the known distribution by more than 100 km.

Pelusios rhodesianus Hewitt, 1927

VARIABLE MUD TURTLE

Pelusios nigricans rhodesianus Hewitt 1927:375, figs. 1a, 1c, pl. 21, figs. 2–3. Holotype: AMG 5432 (now PEM) (collector E. Knowles Jordan). Type locality: “Mpika district, N.E. Rhodesia” [= Mpika, Muchinga Province, Zambia].

Sternotherus Adansoni: Bocage (1867b:217), Frade (1963:252).

Sternotherus gabonensis: Bocage (1866a:40, 1866b:57).

Sternotherus derbianus: Bocage (1895a:3).

Sternotherus sinuatus: Bocage (1895a:4), Monard (1937b:148).

Pelusios sinuatus sinuatus: Schmidt (1933:3).

Pelusios derbianus: Mertens (1938a:430).

Pelusios subniger: Loveridge (1941b:489), Hellmich (1957a:33), Laurent (1950a:13).

Pelusios gabonensis: Laurent (1954a:70, 1964a:25).

Sternothaerus nigricans: Frade (1963:253).

Pelusios castaneus: Laurent (1964a:26).

Pelusios castaneus rhodesianus: Laurent (1965:31).

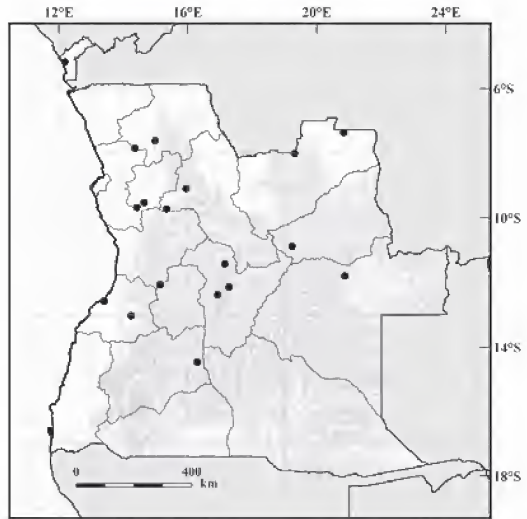
Pelusios rhodesianus: Iverson (1986:247, 1992:66), Broadley (1981a:689), Fritz and Havaš 2007:349, Broadley and Boycott (2008:004.1), Fritz et al. (2011:119), Ceriaco et al. (2014b:670), Turtle Taxonomy Working Group (2014:439), Kindler et al. (2016:305).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is widely distributed in south-central Africa, from Uganda and western Kenya south to Malawi and northern Zimbabwe and west to northeastern Namibia, Angola and Congo. A disjunct population occurs in Swaziland and adjacent parts of South Africa and southern Mozambique.

Ocurrences in Angola (Map 115): This species is very widespread in Angola, except in the arid southwest. **Cabinda:** “Rio Quilo” [-5.18333, 12.18333] (Bocage 1866a:40, 1895a:3; Loveridge 1941b:501; Broadley 1981a:671). **Uige:** “7 km W Uige” [-7.614250, 14.984306] (Kindler et al. 2016, supplemental material:6) **Bengo:** “Ambriz” [-7.844312, 13.106493] (Bocage 1867b:217, 1895a:3; Loveridge 1941b:501; Broadley 1981a:670). **Kwanza Norte:** “Rio Cuanza, Mucoso nahe Dondo” [-9.53333, 14.65000] (Hellmich 1957a:33; Broadley 1981a:671); “Dondo” [-9.68333, 14.43333] (Bocage 1895a:3). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:40, 1866b:57, 1895a:4; Loveridge 1941b:501; Broadley 1981a:671); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:670). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:70, 1964a:25-26; Broadley 1981a:671); “rivière Tchihumbwe” [-8.01667, 19.31667] (Laurent 1950a:13). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:26). **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:26; Broadley 1981a:671). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:3; Loveridge 1941b:501; Laurent 1965:31; Broadley 1981a:671); “Catabola, Rio Cunhinga basin” [-12.144732, 17.280407] (Kindler et al. 2016, supplemental material:5); “Kuito” [-12.383599, 16.928029] (Fritz et al. 2011:119; Kindler et al. 2016, supplemental material:6). **Huambo:** “Galança” [-12.06667, 15.15000] (Broadley 1981a:671). **Benguela:** “Rio Cuce” [-12.58333, 13.41667] (Bocage 1895a:4; Loveridge 1941b:501; Broadley 1981a:671); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:430; Loveridge 1941b:501; Broadley 1981a:671). **Huíla:** “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:148; Loveridge 1941b:501; Broadley 1981a:671).

Taxonomic and distributional notes: This species was described by Hewitt (1927) as a subspecies of *Pelusios nigricans* (= *Pelusios subniger* [Bonnaterre, 1788]) on the basis of a series of specimens. Broadley (1981a) examined five specimens under the same Albany Museum catalogue number, 5432, one of which he regarded as a holotype. These specimens were subsequently transferred to the Port Elizabeth Museum. Loveridge (1941b), Hellmich (1957a) and Laurent (1950a) considered it a synonym of *P. nigricans*, whereas Laurent (1964a, 1965) treated Angolan material



MAP 115. Distribution of *Pelusios rhodesianus* in Angola.

as *P. castaneus* (Schweigger, 1812). Raw (1978) elevated *P. rhodesianus* Hewitt, 1927 to specific rank, an action subsequently confirmed by Broadley (1981a) and accepted by most subsequent authors. Iverson (1987, 1992) presented a point distribution map for the species, although he did not provide information about the localities depicted. Broadley and Boycott (2008) also provided a distribution map of *P. rhodesianus* based on museum and literature records.

Family Testudinidae Batsch, 1788

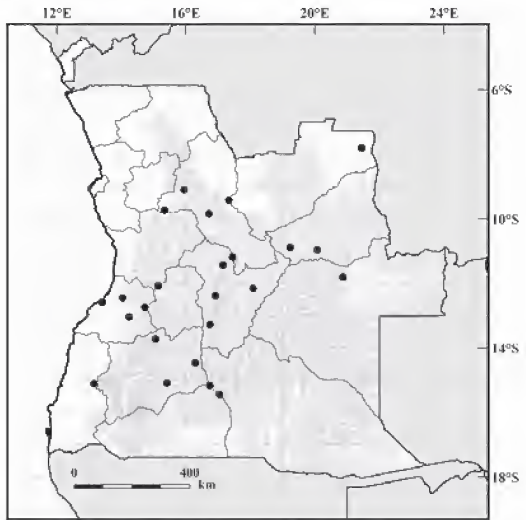
Genus *Kinixys* Bell, 1827

Kinixys belliana and *Kinixys spekii*

The precise delineation of these two species of *Kinixys* in Angola remains unclear and genetic data will be necessary to establish species boundaries (U. Fritz, pers. comm.). To date only *K. belliana* has been genetically verified in Angola but it is highly likely, given the distribution of *K. spekii* elsewhere, that it is also present in the country (see notes below). Collectively the species are widespread, although absent from desert and forest habitats.

Occurrences in Angola (Map 116): The following records combine both *K. belliana* and *K. spekii* (see *K. spekii* account below for the specific reference to its records in the chersonyms list). **Lunda Norte:** “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:13; Loveridge and Williams 1957:396). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:25); “Lunda” [-10.96667, 20.06667] (Monard 1937b:146; Loveridge and Williams 1957:396). **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:25). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:40, 1895a:2; Loveridge and Williams 1957:396); “Muata-Yamv, Lui River” [-9.41667, 17.33333] (Loveridge and Williams 1957:396); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:670); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:53).

Bié: “Gauca” [-11.18333, 17.45000] (Laurent 1964a:25; Loveridge and Williams 1957:396); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:4; Loveridge and Williams 1957:396); “Cuemba” [-12.15000, 18.08333] (Kindler et al. 2012, supporting information:4); “Kuito” [-12.383599, 16.928029] (Kindler et al. 2012, supporting information:4); “Cubando basin (13)” [-13.28061, 16.74722] (Conradie et al. 2016a:8-9, 27). **Huambo:** “Galanga” [-12.06667, 15.15000] (Bocage 1895a:2; Loveridge and Williams 1957:396). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1887b:209, 1895a:2; Loveridge and Williams 1957:396); “Benguella” [-12.58333, 13.41667] (Hellmich 1957a:32); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:146; Loveridge and Williams 1957:396); “Cubal” [-13.03333, 14.25000] (Mertens 1937a:5, 1938a:430; Loveridge and Williams 1957:396). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:2; Loveridge and Williams 1957:395); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:146); “Osi” [-15.08333, 15.41667] (Monard 1937b:146; Loveridge and Williams 1957:396). **Cunene:** “riv. Mbalé” [-15.16667, 16.75000]



MAP 116. Distribution of *Kinixys belliana* and *Kinixys spekii* in Angola.

(Monard 1937b:146; Loveridge and Williams 1957:396). **Namibe:** “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:2; Loveridge and Williams 1957:396; Ceriaco et al. 2016a:54). **Cuando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1937b:146; Loveridge and Williams 1957:396).

Taxonomic and distributional notes: There is some confusion surrounding the description of *K. belliana* (Bour 2006). Gray (1831a) in his *Synopsis Reptilium. Cataphracta*, the most frequently cited source of the description (e.g., King and Burke 1989), includes in his section “Additions and Corrections” a relatively detailed description headed “*Kinixys Belliana*, Gray, Griffith, Trans. Animal Kingd.” In the other publication (Gray 1831b) a very short description is provided under the heading “Bell’s Tortoise. *Test. (Kinixys) Belliana*, Gray.” The latter work has a note by Gray dated “Oct. 1830,” whereas the first has a preface dated “Jan. 1831.” The title pages for both works are dated 1831. Thus it appears that the shorter description was written first, although this does not clarify which version was published first. We here cite the more extensive description in the *Cataphracta* (Gray 1831a). For some time all southern African hinged-back tortoises were treated as a single species, *Kinixys belliana* Gray, 1831 (Loveridge and Williams 1957). However, Pritchard (1979) suggested that a more detailed investigation might confirm the validity of some of the form described earlier as *Kinixys spekii* Gray, 1863. Broadley (1981b) divided *K. belliana* into two subspecies, the typical form being restricted to the coastal plain, with the depressed form *K. b. spekii* replacing it inland. He later recognized the two as specifically distinct (Broadley 1989a, 1993). Broadley (1989a) provided a distribution map for *K. spekii* depicting Angolan records previously assigned to *K. belliana*. However, he later stated that *K. belliana* extends to Angola (Broadley 1992a), whereas the presence of *K. spekii* had not yet been confirmed (Broadley 1993). Iverson (1986, 1992) placed *K. spekii* as a synonym of *K. belliana* and provided a map with all the known records from the country assigned to the latter. Mifsud and Stapleton (2014) and the Turtle Taxonomy Working Group (2014) suggested that *K. belliana* occurs widely in Angola exclusive of the southeast and the true desert, whereas *K. spekii* is limited to the southeastern border areas with the Caprivi Strip and Zambia. On the other hand, Fritz and Havaš (2007), Branch (2008) and Vetter (2011) considered *K. belliana* to be extralimital, with *K. spekii* widespread in Angola. A recent study of phylogeography, phylogeny and taxonomy of hinged-back tortoises (Kindler et al. 2012) found that the previously recognized savanna species *K. belliana* comprises three deeply divergent clades that are now treated as distinct species. Angolan populations are members of the clade that retains the name *K. belliana*, whereas West African and southeast African clades have been allocated to *K. nogueyi* (Lataste, 1886) and *K. zombensis* Hewitt, 1931, respectively. Kindler et al. (2012) did identify *K. spekii* in Angola near the Namibian border, however, so it is highly likely that it occurs at least in southeastern Angola, although pending further investigation we list all *K. belliana*/*K. spekii* records together.

***Kinixys belliana* Gray, 1831**

BELL’S HINGE-BACK TORTOISE

Kinixys Belliana Gray, 1831a:69. Holotype: BMNH 1979.919 (collector unknown). Type locality: “?” [“bought at Humphrey’s, West Africa” according the label on the type specimen *vide* King and Burke (1989)].

Cinixys belliana: Bocage (1866a:40, 1895a:2), Bocage (1887c:209), Monard (1937b:146).

Kinixys belliana: Schmidt (1933:4), Laurent (1950a:13), Iverson (1986:158, 1992:271), King and Burke (1989:89), Broadley (1992a:12), Kindler et al. (2012:193), Turtle Taxonomy Working Group (2014:402), Ceriaco et al. (2016b:54).

Kinixys belliana belliana: Mertens (1937a:5, 1938a:430), Hellmich (1957a:32), Loveridge and Williams (1957:384), Loveridge (1957:170), Laurent (1964a:25), Broadley (1981b:208, 1992a:13, 1993:47).

Kinixys cf. belliana: Conradie et al. (2016:27).

Global conservation status (IUCN): Not Evaluated [Least Concern 1996]

Global distribution: We here follow the distributions presented by Kindler et al. (2012) in their supporting information. The species ranges from the Red Sea coast of Sudan and the Horn of Africa south to the Kenya-Tanzania border area and thence southwest to central Angola.

***Kinixys spekii* Gray, 1863**

SPEK'S HINGED-BACK TORTOISE

Kinixys spekii Gray, 1863a:381. Holotype: BMNH 1936.5.3.117 (collector J. H. Speke). Type locality: "Central Africa" probably "northwestern Tanzania" *fide* Broadley and Howell (1991).

Kinixys belliana spekii: Broadley (1981b:211).

"*Kinixys spekii*": Broadley (1989a:52).

Kinixys spekii: Fritz and Havaš (2007:286), Branch (2008:53), Vetter (2011:79), Kindler et al. (2012:193), Ceriaco et al. (2014b:670), Turtle Taxonomy Working Group (2014:403), Ceriaco et al. (2016b:53).

Global conservation status (IUCN): Not Evaluated.

Global distribution: We here follow the distributions presented by Kindler et al. (2012) in their supporting information as modified in The Turtle Taxonomy Working Group 2017). The species is known from southern Central Africa from Kenya and Uganda south to northern KwaZulu-Natal, South Africa (although not in the coastal plain and lowlands of southeastern Kenya, Tanzania and Mozambique) and west to the Caprivi Strip of Namibia and adjacent Cuando Cubango, Angola.

***Kinixys erosa* (Schweigger, 1812)**

FOREST HINGE-BACK TORTOISE

Testudo erosa Schweigger 1812:321. Syntypes: Two specimens originally in the Mannheim Museum and a specimen described and figured by Shaw (1802:59, pl. 13) (collectors unknown). Type locality: "America septentrionali" [in error].

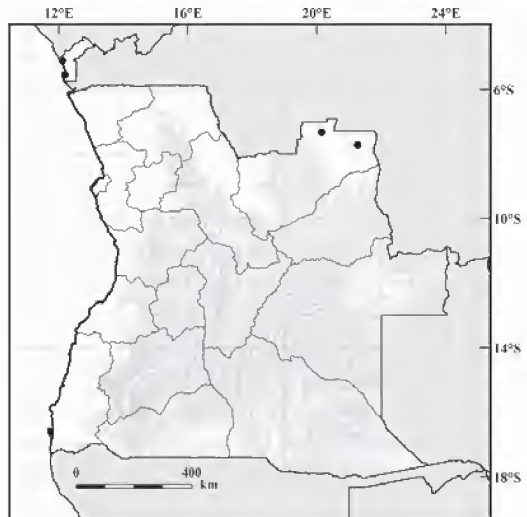
Cinixys erosa: Bocage (1866a:40, 1895a:1), Peters (1877a:611).

Kinixys erosa: Laurent (1964a:24), Iverson (1986:159, 1992:272), Spawls et al. (2004:52), Fritz and Havaš 2007:285, Branch (2008:50), Vetter (2011:75), Kindler et al. (2012:193), Luiselli and Diagne (2014:084.1), Mifsud and Stapleton (2014:26), Turtle Taxonomy Working Group (2014:402).

Global conservation status (IUCN): Data Deficient.

Global distribution: A widespread silvicolous species in West Africa, preferring moist areas such as marshes and river banks from Gambia eastward through the Democratic Republic of Congo to Uganda, and south areas adjacent to the mouth of the Congo River.

Ocurrences in Angola (Map 117): This species is limited to extreme northern regions of the country, including Cabinda. **Cabinda:** "Chinchoxo" [-5.10000, 12.10000] (Peters 1877a:611); "Cabinda" [-5.55000, 12.18333] (Bocage 1866a:40, 1895a:1; Mifsud and Stapleton 2014:31). **Lunda Norte:** "près de la R. Camuálua (ou Camuáli), affl. de la rive gauche du Chicapa, à l'Ouest de Dundo, Posto de Lóvuá" [-7.31667, 20.15000] (Laurent 1964a:24; Luiselli and Diagne 2014:084.6; Mifsud and Stapleton 2014:31); "affl. non



MAP 117. Distribution of *Kinixys erosa* in Angola.

determine du Chicapa, à peu près dans la meme region que le precedent” (which represent the locality cited above: “affl. de la rive gauche du Chicapa, à l’Ouest de Dundo, Posto de Lóvua”) (Laurent 1964a:24); “Cambulo, 70 km from the border with Democratic Republic of Congo, Kinshasa” [-7.73333, 21.26667] (Luiselli and Diagne 2014:084.6; Mifsud and Stapleton 2014:31).

Taxonomic and distributional notes: Bour (in Iverson 1992) stated that the syntype figured by Shaw might have been in the Leverian Museum. This collection was sold at auction in 1806 and dispersed to a number of private and state-owned museums, but this specimen has not been located.

Genus *Stigmochelys* Gray, 1873

Stigmochelys pardalis (Bell, 1828)

LEOPARD TORTOISE

Testudo pardalis Bell 1828:420, Suppl. Pl. 25. Type: Not located, originally in the Bell Collection, part of which was later donated to the OUM (King and Burke 1989). Type locality: “in Promont. Bonae Spei” (collector unknown), [= Cape of Good Hope], Western Cape Province, South Africa.

Testudo pardalis: Bocage (1867b:217, 1870:68, 1895a:3), Monard (1937b:147), Hellmich (1957a:32).

Testudo pardalis pardalis: Mertens (1937a:5).

Geochelone pardalis babcocki: Loveridge and Williams (1957:235).

Geochelone pardalis: Iverson (1986:143, 1992:252), Broadley (1989b:43), Le et al. (2006:524).

Stigmochelys pardalis: Fritz and Bininda-Emonds (2007:305), Fritz and Havaš (2007:297), Branch (2008:66), Fritz et al. (2010:348), Vetter (2011:91), Turtle Taxonomy Working Group (2014:406), Ceriaco et al. (2016a:54), Conradie et al. (2016:27).

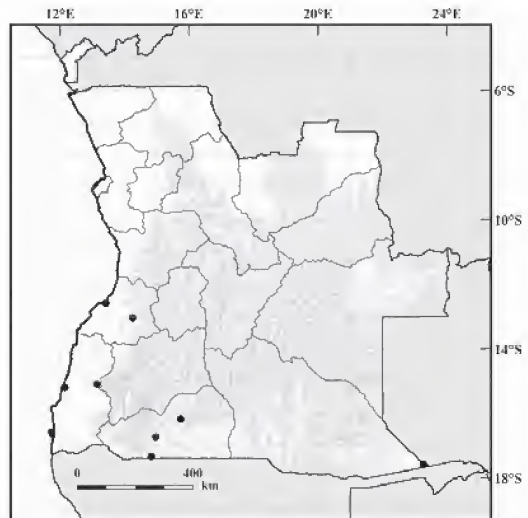
Global conservation status (IUCN): Least Concern.

Global distribution: This species is distributed from southern Sudan and Ethiopia southwards through eastern Africa to South Africa, and northward to Namibia and southern Angola.

Occurrences in Angola (Map 118): This species occurs in southwestern Angola and eastwards along the Namibian border.

Benguela: “Benguella” [-12.58333, 13.41667] (Bocage 1867b:217, 1895a:3; Hellmich 1957a:32, Loveridge and Williams 1957:251); “Cubal” [-13.03333, 14.25000] (Mertens 1937a:5; Loveridge and Williams 1957:251).

Namibe: “Capangombe” [-15.10000, 13.15000] (Loveridge and Williams 1957:251; Ceriaco et al. 2016a:54); “Mossamedes” [-15.20000, 12.15000] (Bocage 1895a:3; Ceriaco et al. 2016a:54). **Cunene:** “Mupa” [-16.18333, 15.75000] (Monard 1937b:147; Loveridge and Williams 1957:251); “Forte Roçadas” [-16.73333, 14.98333] (Monard 1937b:147; Loveridge and Williams 1957:251); “Dombodola” [-17.33333, 14.83333] (Monard 1937b:147; Loveridge and Williams 1957:251). **Cuando Cubango:** “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10, 27).



MAP 118. Distribution of *Stigmochelys pardalis* in Angola.

Taxonomic and distributional notes: Bell’s (1828) description notes that the type was in his own collection at the time. The majority of the collection was purchased by F. W. Hope, who donated

ed it to the Oxford University Museum in 1862. However, a recent catalogue of the types there reveals that the type of *S. pardalis* is not present (Nowak-Kemp and Fritz 2010). *Stigmochelys pardalis* (Bell, 1828) was previously included in the genus *Testudo* and more recently, in the genus *Geochelone* (Loveridge and Williams 1957; Iverson 1992). Based on data from mitochondrial and nuclear genes, Le et al. (2006:524, 528) indicated a sister relationship between *S. pardalis* and *Psammobates* and subsumed it within the latter genus. However, based on morphological differences, Fritz and Bininda-Emonds (2007) placed it in a monotypic *Stigmochelys*, which has been accepted by subsequent authors. Loveridge and Williams (1975) recognized two subspecies for *Geochelone* (= *Stigmichelis*) *pardalis* (Bell, 1828) *G. p. pardalis* and *G. p. babcocki*, also distinguished by Le et al. (2006) and Fritz and Havaš (2007). Iverson (1992) formerly questioned the recognition of the two subspecies and recently Fritz et al. (2010) concluded that there is no rationale for recognizing subspecies within *S. pardalis*. Broadley (1989b) and Iverson (1986, 1992) presented distribution maps for the species with some new Angolan localities but without mentioning the localities by name.

Family Trionychidae Fitzinger, 1826

Genus *Cycloderma* Peters, 1854

Cycloderma aubryi (Duméril, 1856)

AUBRY'S SOFTSHELL TURTLE

Cryptopodus Aubryi Duméril 1856:374, pl. 20. Holotype, MNHN 8006 (collector C.E. Aubry-Lecomte). Type locality: "Gabon."

Cycloderma Aubryi: Peters (1877a:611), Bocage (1895a:8).

Cycloderma aubryi: Loveridge and Williams (1957:453), Frade (1963:252), Iverson (1992:295), Gramentz (2008:117), Turtle Taxonomy Working Group (2014:411).

Global conservation status (IUCN): Vulnerable.

Global distribution: Central African species known from the Congo Basin from Gabon to the Democratic Republic of Congo and Cabinda in Angola.

Occurrences in Angola (Map 119): This species occurs in the Cabinda enclave. **Cabinda:** "Chinchoxo" [-5.10000, 12.10000] (Peters 1877a:611; Bocage 1895a:7; Loveridge and Williams 1957:459; Gramentz 2008:140); "Cabinda" [-5.55000, 12.18333] (Frade 1963:252), Turtle Taxonomy Working Group (2014:411).

Taxonomic and distributional notes: Bour et al. (1995) discussed the type specimen.



MAP 119. Distribution of *Cycloderma aubryi* in Angola.

Genus *Trionyx* Geoffroy Saint-Hilaire, 1809

Trionyx triunguis (Forskål, 1775)

AFRICAN SOFTSHELL TURTLE

Testudo triunguis Forskål 1775: ix. Holotype, lost *vide* Webb in Iverson (1992), (collector P. Forskål). Type locality: "In Nilo" [= the Nile], Egypt.

Gymnopus aegyptiacus: Bocage (1867b:218).

Trionyx triunguis: Peters (1877a:611), Bocage (1895a:7), Loveridge and Wiliams (1957:423), Loveridge (1957:172), Saldanha (1966:8), Hughes (1979:203), Iverson (1986:196, 1992:318), Branch (1998:43, 2008 74), Turtle Taxonomy Working Group (2014:420).

Amyda triunguis: Mertens (1926:152).

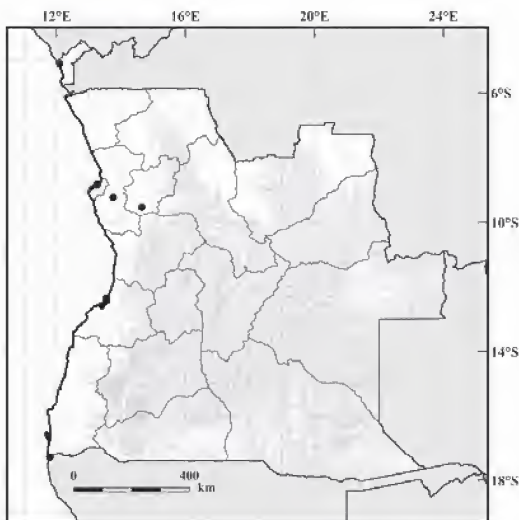
Amyda triunguis triunguis: Hellmich (1957a:33).

Global conservation status (IUCN): Vulnerable.

Global distribution: This species is widespread in tropical West Africa south of the Sahara as well as through the Nile Valley and around the eastern Mediterranean as far as Turkey. A disjunct population occurs in the Jubba and Scabelle rivers (Somalia), draining the Ethiopian Highlands.

Ocurrences in Angola (Map 120): This species occurs in western Angola, mainly in near coastal drainages from Cabinda to the Cunene mouth. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:611; Bocage 1895a:7; Loveridge and Wiliams 1957:435). **Bengo:** “Cunga” [-9.23333, 13.76667] (Loveridge and Wiliams 1957:435). **Luanda:** “Loanda” [-8.83333, 13.26667] (Loveridge and Wiliams 1957:435). **Kwanza Norte:** “Cuanza, Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:33; Loveridge and Wiliams 1957:435). **Benguela:** “Lobito bay” [-12.35000, 13.55000] (Loveridge and Wiliams 1957:435); “Catumbella” [-12.43333, 13.55000] (Bocage 1867b:218, 1895a:7; Mertens 1926:152); Loveridge and Wiliams 1957:435); “Benguella” [-12.58333, 13.41667] (Bocage 1895a:7; Loveridge and Wiliams 1957:435). **Namibe:** “Cunene mouth” [-17.28333, 11.80000] (Hughes 1979:203 [Fig. 67]).

Taxonomic and distributional notes: Loveridge and Wiliams (1957) provided a detailed review of the species.



MAP 120. Distribution of *Trionyx triunguis* in Angola.

Order CROCODYLIA Gmelin, 1789

Family Crocodylidae Cuvier, 1808

Genus *Crocodylus* Laurenti, 1768

Crocodylus niloticus Laurenti, 1768

NILE CROCODILE

Crocodylus niloticus Laurenti 1768:53. Type: not located *fide* King and Burke (1989:11). Type locality: “Indien und Ägypten”, later restricted to “Ägypten” [= Egypt] by Fuchs et al. (1974a:110).

Crocodylus vulgaris: Günther (1865a:480), Bocage (1866a:41, 1867b:218, 1895a:8), Peters (1877a:611), Monard (1937b:150).

Crocodylus niloticus: Ferreira (1903:16), Themido (1941:11), Hellmich (1957a:31), Saldanha (1966:8), Branch and McCartney (1992:3), Ceriaco et al. (2014b:669), Branch and Conradie (2015:200), Conradie et al. (2016:26).

Crocodylus niloticus chamses: Fuchs et al. (1974a:111).

Global conservation status (IUCN): Least Concern.

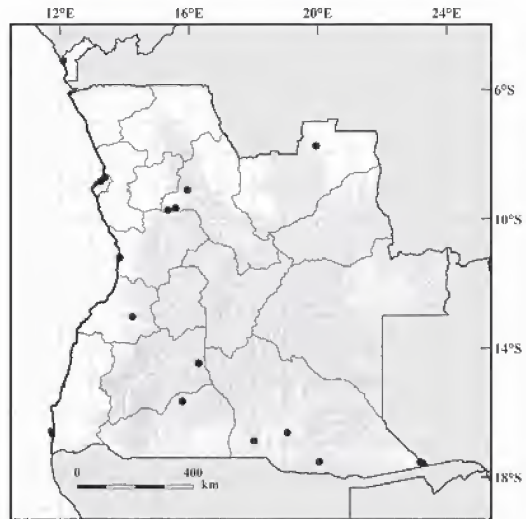
Global distribution: Widespread across much of eastern sub-Saharan Africa, northward along

the Nile Valley into Egypt, and westwards across northern Namibia and southern Angola and thence northwards up the Atlantic coast to Cameroon. Also present in Madagascar.

Occurrences in Angola (Map 121): This species occurs across the country, despite the scarcity of publish data the Angolan population as traditionally been reported very high in almost all of the hydrographic basins. **Cabin-da:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:611). **Lunda Norte:** “Carumbo” [-7.74422, 19.95467] (Branch and Conradie 2015:200). **Luanda:** “Rio Bengo” [-8.71667, 13.40000] (Bocage 1866a:41); “Loanda” [-8.83333, 13.26667] (Bocage 1866a:41). **Malanje:** “Pungo Andongo” [-9.66667, 15.58333] (Günther 1865a:480); “Duque de Bragança” [-9.10000, 15.95000] (Ferreira 1903:16); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:669). **Kwanza Sul:** “Novo Redondo” [-11.20000, 13.85000] (Bocage 1867b:218). **Benguela:** “Alto Cubal” [-13.03333, 14.25000] (Hellmich 1857a:31).

Huíla: “fleuve Kuvangu” [-14.46667, 16.30000] (Monard 1937b:150). **Cunene:** “étangs du Kuvelai” [-15.65000, 15.80000] (Monard 1937b:150). **Cuando Cubango:** “sight below the Mupupa Falls” [-17.51667, 20.05000] (Branch and McCartney 1992:3); “Cuito basin (29)” [-17.87291, 19.83333] (Conradie et al. 2016:9-10, 26); Cuito basin (35) observation” [-16.62322, 19.05352] (Conradie et al. 2016:9-10, 27); “Cubango basin (43) observation” [-17.53500, 23.18916] (Conradie et al. 2016:9-10, 26); “Cuando basin (44a) observation” [-17.57333, 23.26000] (Conradie et al. 2016:9-10, 27); “Cubango basin (45) observation” [-16.88350, 18.01180] (Conradie et al. 2016:9, 12, 27).

Taxonomic and distributional notes: *Crocodylus niloticus* is a widespread species throughout much of sub-Saharan Africa, however, some West African populations long assigned to *C. niloticus* are recognized as *C. suchus* (Geoffroy Saint-Hilaire, 1807), a taxon recently resurrected from synonymy (Schmitz et al. 2003). Fuchs et al. (1974a) previously recognized seven subspecies in *C. niloticus* and applied the name *C. niloticus chamse* to the Angolan population. The actual distributions of *C. niloticus sensu stricto* and *C. suchus* are poorly known in the region of central West Africa and Angola in particular (Fergusson 2010), thus it is unclear if Angolan populations represent one or both of the species. Grigg and Kirshner (2015) provided a distribution map with the ranges of *C. niloticus* and *C. suchus* in Africa, which reflects the lack of data from central regions in Angola, but suggests that *C. niloticus* is the sole species occurring in the country, an interpretation we here accept. Branch and McCartney (1992) stated that the species is commonly found in all the major permanent river systems, including the Cuito and Cubango rivers. Hellmich (1957a) also referred to a large population in the Kwanza River, while Monard (1937b) mentioned sightings from Cunene near Forte Roçadas, Capolongo along the Cuvango, and at the mouth of Catumbela. Monard (1932) identified the mythical creature named “Libata” by locals of Chiumbé and Cuílo (northeast of Angola) as *C. niloticus*.



MAP 121. Distribution of *Crocodylus niloticus* in Angola.

Genus *Mecistops* Gray, 1844***Mecistops* cf. *cataphractus* (Cuvier, 1825)****WEST AFRICAN SLENDER-SNOUDED CROCODILE**

Crocodylus cataphractus (Cuvier 1825:58). Holotype: RCSM 710 (collector unknown). Type locality: “Senegal,” *vide* Fuchs et al. (1974b:3).

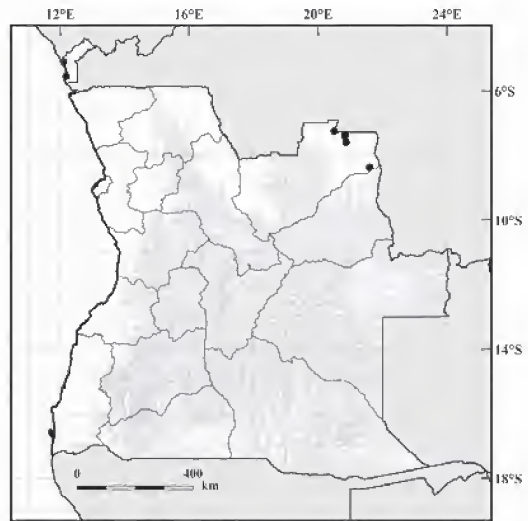
Crocodylus cataphractus: Peters (1877a:611), Bocage (1895a:9), Loveridge (1957:176), Frade (1963:252), Laurent (1964a:27).

Crocodylus cataphractus cataphractus: Fuchs et al. (1974b:3).

Global conservation status (IUCN): Critically Endangered.

Global distribution: A widely distributed species throughout West and Central Africa.

Ocurrences in Angola (Map 122): This species occurs in northern Angola, close to the Congo basin. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:611); “Zona de Cabinda” [-5.55000, 12.18333] (Frade 1963:252); “côte de Loango” (Bocage 1895a:9). **Lunda Norte:** “Dundo, canal de la Mussungue” [-7.25000, 20.50000] (Laurent 1964a:27), “environs de Dundo” [-7.36667, 20.83333] (Laurent 1964a:27); “environs de Dundo, R. Mussungue, affl. du Luachimo” [-7.41667, 20.83333] (Laurent 1964a:27); “Dundo, R. Luachimo, près de l’embouchure du fleuve Dilolo” [-7.60000, 20.86667] (Laurent 1964a:27); “affl. de la Luembe ± 70 km au SE de Dundo” [-8.37140, 21.59368] (Laurent 1964a:27).



MAP 122. Distribution of *Mecistops* cf. *cataphractus* in Angola.

Taxonomic and distributional notes:

The taxonomy of African crocodiles is still unresolved. According to Schmitz et al. (2003) the species *Crocodylus cataphractus* (Cuvier, 1825) is not closely related to other *Crocodylus* species, and they considered *C. cataphractus* and *Osteolaemus tetraspis* Cope, 1861 as sister species. McAliley et al. (2006) recommend the resurrection of the historic Genus *Mecistops* Gray, 1844 to accommodate this species, based on recent molecular and morphological analyses that support the distinction of *M. cataphractus* from *Crocodylus* species. The recent mitochondrial DNA analysis of Feng et al. (2010) corroborates this interpretation. Historically, *M. cataphractus* was widely distributed throughout West and Central Africa but recent studies by Shirley (2013) and Shirley et al. (2013) have found molecular and morphological support for two divergent taxa in this genus, one distributed entirely in West Africa and the other in Central Africa (IUCN 2014). *Mecistops* from Angola belong to undescribed species, occurring in Cabinda Province and Lunda Norte (Grigg and Kirshner 2015), although Shirley (2010) and Shirley et al. (2014) considered the distribution to exclude northeastern Angola.

Genus *Osteolaemus* Cope, 1861***Osteolaemus tetraspis* Cope, 1861****AFRICAN DWARF CROCODILE**

Osteolaemus tetraspis (Cope 1861:549). Syntypes: not located *vide* King and Burke (1989:14) (collector P. B. Du Chaillu [skin]; donation from Museum of the Pennsylvania University [skull of a half-grown individual]). Type locality: “Ogobai River, Western Africa” (Cope 1861:550) [= Ogooué River], Gabon.

Crocodylus frontatus: Bocage (1866a:41), Peters (1877a:611).

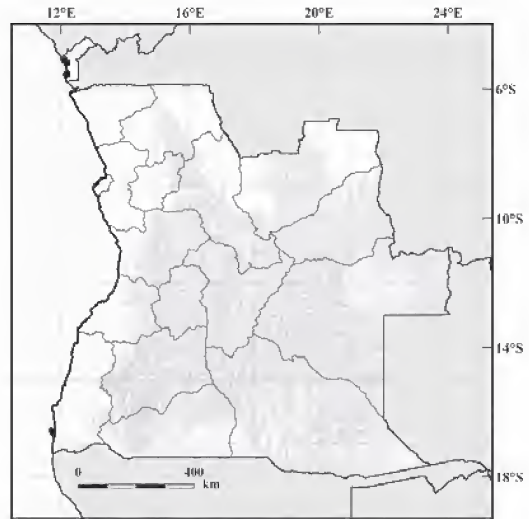
Crocodylus tetraspis: Bocage (1895a:9), Frade (1963:252), Grigg and Kirshner (2015:12).

Global conservation status (IUCN): Vulnerable.

Global distribution: *Osteolaemus tetraspis sensu lato* is known from across the tropical low-land regions of sub-Saharan West Africa and West Central Africa, from Senegal to the southeastern Democratic Republic of Congo. *Osteolaemus tetraspis sensu stricto* (see Notes below) occurs south of the Cameroon Volcanic Line and primarily west of the Congo Basin.

Occurrences in Angola (Map 123): This species occurs in Cabinda enclave and in the north of the country, although all published records come from Cabinda alone. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:611; Bocage 1895a:252); “Rio Quilo” [-5.18333, 12.18333] (Bocage 1866a:41, 1895a:9); “Zona de Cabinda” [-5.55000, 12.18333] (Frade 1963:252).

Taxonomic and distributional notes: The taxonomy of the African dwarf crocodile, *Osteolaemus tetraspis* has been under debate for many years (Eaton et al. 2008). The species was first described by Cope 1861, from the Ogooué Basin. A second dwarf crocodile genus, *Osteoblepharon* was proposed by Schmidt (1919) but regarded as a synonym of *Osteolaemus* by Mertens (1943) and Inger (1948). Eaton et al. (2008) revealed that the genus *Osteolaemus* contains at least three distinct species: *O. tetraspis* from the greater Ogooué Basin (including Gabon, portions of Cameroon and southwest Congo), *O. osborni* (Schmidt, 1919) from the Congo Basin, and a putative new species from West Africa. However, Franke et al. (2013) considered *O. osborni* as a subspecies of *tetraspis*. In Angola the species is confirmed only from Cabinda, which agrees with the current known distribution presented by Grigg and Kirshner (2015).



MAP 123. Distribution of *Osteolaemus tetraspis* in Angola.

Order SQUAMATA Oppel, 1811

LIZARDS

Family Gekkonidae Gray, 1825

Genus *Afroedura* Loveridge, 1944

Afroedura bogerti complex Loveridge, 1944

BOGERT'S ROCK GECKO

Afroedura karroica bogerti Loveridge 1944:1, fig. 1. Holotype: AMNH 47841 (collectors H. and A. Chapman). Type locality: “Namba (Mombolo),” Kwanza Sul Province, Angola.

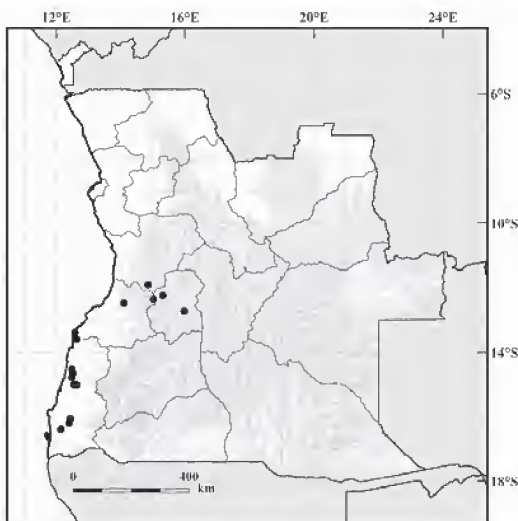
Afroedura cf. *bogerti*: Branch (1998:232).

Afroedura bogerti: Bates et al. (2014:93), Jacobsen et al. (2014:467), Branch et al. (2017:158).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and Namibia.

Ocurrences in Angola (Map 124): The species was until recently only known from the type locality “Namba (Mombolo),” Kwanza Sul Province. The current distribution comprise the southwestern regions along the coast from Kwanza Sul to Namibe Province. **Kwanza Sul:** “Namba (Mombolo)” [-11.91667, 14.85000] (Loveridge 1944:1); “on track from Atome to Cassongue (vicinity of Missão da Namba)” [-11.91719, 14.86086] (Branch et al. 2017:162). **Huambo:** “10 km west of Soque” [-12.36256, 15.02847] (Branch et al. 2017:161); “1 km south Luimbale” [-12.25369, 15.31689] (Branch et al. 2017:162); “Candumbo Rocks, 16 km west of Vila Nova” [-12.73600, 15.97439] (Branch et al. 2017:162); “1 km west Kandumbo on road to Boas Aguas” [-12.73614, 15.97442] (Branch et al. 2017:162). **Benguela:** “3 km west of Bicoio” [-12.48278, 14.10689] (Branch et al. 2017:162); “Praia do Meva (near Santa Maria)” [-13.39667, 12.58972] (Branch et al. 2017:162). **Namibe:** “Lucira road, 5 km south of Catara River” [-13.60431, 12.64556] (Branch et al. 2017:161); “turn off Morro do Chapéu Armando” [-14.52856, 12.50189] (Branch et al. 2017:161); “small granite outcrops in succulent veld, 52 km N on tar road in road to Lucira from junction with Lubango-Namibe road” [-14.65806, 12.52717] (Branch et al. 2017:162); “1 km east of Farm Mucongo” [-14.78361, 12.49694] (Branch et al. 2017:162); “Granite outcrops in sandy veld, 50 km E Namibe on main tar road to Leba” [-15.01558, 12.55503] (Branch et al. 2017:162); “Caraculo” [-15.02686, 12.65210] (Branch et al. 2017:161); “Tambor” [-16.06669, 12.44997] (Branch et al. 2017:161); “Furnas (? – plotted as nearest rock outcrops to centre of quarter-degree square (QDS) 1612Ab” [-16.39167, 12.14167] (Branch et al. 2017:161); “Omauha Lodge, 15 km south of Tambor” [-16.20061, 12.40183] (Branch et al. 2017:162); “0.5 km south of Tambor” [-16.07414, 12.43328] (Branch et al. 2017:162).



MAP 124. Distribution of *Afroedura bogerti* in Angola.

Taxonomic and distributional notes: Onderstaal (1984) elevated the species to specific status (Jacobsen et al. 2014). There is deep genetic divergence among Angolan populations, suggestive of a complex of several species (Branch et al. 2017).

Genus *Afrogecko* Bauer, Good and Branch, 1997

Afrogecko ansorgii (Boulenger, 1907)

ANSORGE'S GECKO (Endemic)

Phyllodactylus Ansorgii Boulenger 1907a:212. Holotype: BMNH 1946.8.24.52-53 [2 specimens] (collector W.J. Ansorge). Type locality: “Maconjo, Benguela” [= Fazenda Mucungo], Namibe Province, Angola.

Afrogecko ansorgii: Bauer et al. (1997:476), Bates et al. (2014:100), Heinicke et al. (2014:31), Ceriaco et al. (2016a:54).

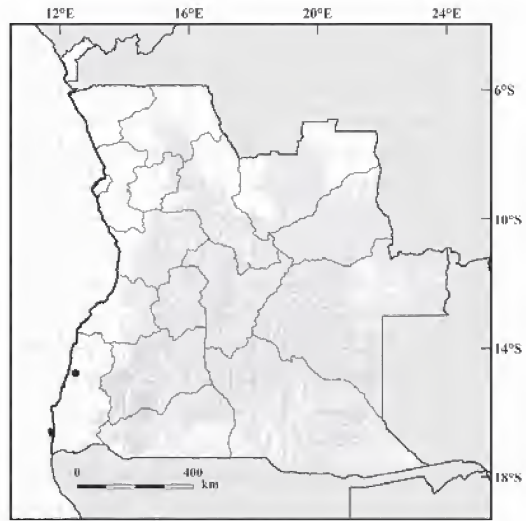
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known only from Angola.

Ocurrences in Angola (Map 125): The species is known only from the type locality “Maconjo.” **Namibe:** “Maconjo (= Fazenda Mucungo)” [-14.782192, 12.486557] (Boulenger 1907a:212; Bauer et al. 1997:478; Ceriaco et al. 2016a:54).

Taxonomic and distributional notes:

According to the original publication and Bauer et al. (1997) the species is restricted to Angola and known only from the type locality. Heinicke et al. (2014) in a revision of the circum-Indian Ocean clade of leaf-toed geckos concluded that the phylogenetic position of *Afrogecko ansorgii* (Boulenger, 1907) is unclear, although they tentatively retained this species in *Afrogecko* pending further data. The species has recently been rediscovered (W.R. Branch, pers. comm., January, 2017) and is now known from several localities.



MAP 125. Distribution of *Afrogecko ansorgii* in Angola.

Genus *Chondrodactylus* Peters, 1870***Chondrodactylus fitzsimonsi* (Loveridge, 1947)****BUTTON-SCALED THICK-TOED GECKO**

Pachydactylus laevigatus tessellatus FitzSimons 1938:172, fig. 6. Holotype: TM 17202 (collector V.F.M. FitzSimons). Type locality: “Kamanyab” [= Kamanjab, Kunene Region] Namibia.

Pachydactylus laevigatus fitzsimonsi Loveridge 1947:400. *Nomen substitutum* (see Notes below).

Pachydactylus laevigatus: Schmidt (1933:5).

Pachydactylus laevigatus fitzsimonsi: Laurent (1964a:38).

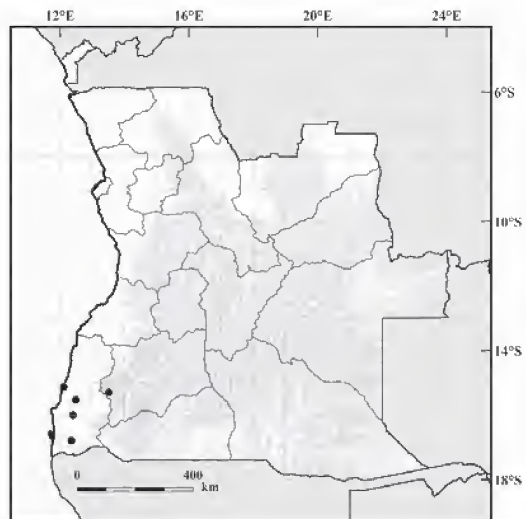
Pachydactylus fitzsimonsi: Benyr (1995:50), Branch (1998:255).

Chondrodactylus fitzsimonsi: Bauer and Lamb (2005:117), Ceríaco et al. (2016a:23, 54).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is restricted to central and northern parts of western Namibia and adjacent Angola.

Ocurrences in Angola (Map 126): The species occurs in southwestern Angola, mainly in Namibe Province. **Huíla:** “Ongueria, 55 km au S.S.E. de Sá da Bandeira” [-15.30000, 13.51667] (Laurent 1964a:38). **Namibe:** “plage «das Conchas», près de Moçâmedes” [-15.13333, 12.11667] (Laurent 1964a:38; Ceríaco et al. 2016b:54); “environs de Moçâmedes, au bord de la route de Sá da Bandeira” (Laurent 1964a:38; Ceríaco et al. 2016a:54); “Espinheira” [-16.78731, 12.35817] (Ceríaco et al. 2016a:23); “Iona National Park, north of Tambor” [-15.99636, 12.40667] (Ceríaco et al. 2016a:23); “Pico Azevedo” [-15.53400, 12.49197] (Schmidt 1933:5).



MAP 126. Distribution of *Chondrodactylus fitzsimonsi* in Angola.

Taxonomic and distributional notes: The genus *Chondrodactylus* was previously considered a monotypic (*C. angulifer*) but Bauer and Lamb (2005) demonstrated that a clade of large-bodied geckos, the *Pachydactylus bibronii* group (Lamb and Bauer 2002), is sister to *C. angulifer* and moved these taxa into *Chondrodactylus*. *Pachydactylus laevigatus fitzsimonsi* Loveridge, 1947 replaced the name *P. l. tessellatus* FitzSimons, 1938 which was preoccupied by *P. tessellatus* (Werner, 1910), which is currently regarded as a synonym of *Pachydactylus capensis* (Smith, 1846). Reference to Schmidt's (1933) plate image of "*P. laevigatus*" reveals that his specimens were, in fact, *C. fitzsimonsi*. Although cited in the chresonymy, specific localities from the unpublished theses of Benyr (1995) and Heinz (2011) have not been listed above.

***Chondrodactylus pulitzerae* (Schmidt, 1933)**

PULTIZER'S THICK-TOED GECKO

Pachydactylus bibronii pulitzerae Schmidt (1933:6, pl. 1). Holotype: CM 5619 (collector R. and L. Boulton).

Type locality: "Pico Azevedo," Namibe Province, Angola.

Homodactylus Bibronii: Bocage (1867b:220, 1867c:227, 1895a:15).

Pachydactylus bibronii: Boulenger (1885:201), Bocage (1895a:15, 1887b:202, 1887c:209), Mertens (1926:152), Monard (1937b:53).

Pachydactylus bibronii pulitzerae: Parker (1936:129), Mertens (1937a:7, 1938a:431), Barbour and Loveridge (1946:164), Loveridge (1947:403), Hellmich (1957a:36, 1957b:49), Laurent (1964a:37), Marx (1959:466).

Pachydactylus laevigatus laevigatus: Loveridge (1947:398; 1957:191).

Pachydactylus bibronii turneri (part): Loveridge (1947:405).

Pachydactylus laevigatus pulitzerae: Benyr (1995:50).

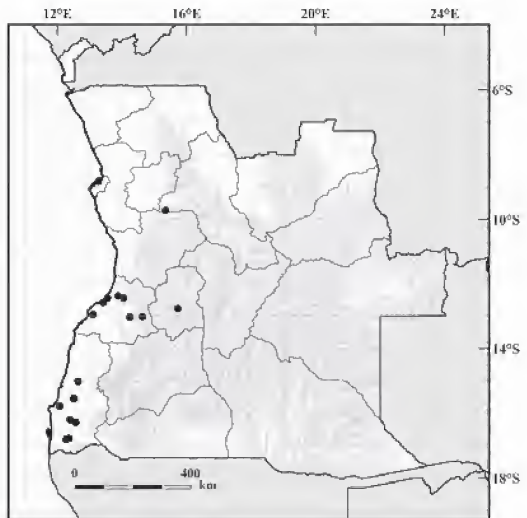
Chondrodactylus pulitzerae: Heinz (2011:55), Ceriaco et al. (2014b:670), Ceriaco et al. (2016a:24, 54), Heinicke et al. (2017:4), Ceriaco et al. (2017:42).

Chondrodactylus cf. *pulitzerae* (part): Conradie et al. (2016:24).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and far northwestern Namibia.

Ocurrences in Angola (Map 127): The species occurs along the coast, mainly in the southern Angola (Fig 135). **Luanda:** "campus of the Universidade Metodista de Angola, in Caop Velha, Cacucaco Municipality [-8.78713889, 13.46361111] (Ceriaco et al. 2017:42);" "Loanda" [-8.83333, 13.26667] (Bocage 1895a:15; Loveridge 1947:404). **Malanje:** "Capanda" [-9.72841, 15.34585] (Ceriaco et al. 2014b:670). **Huambo:** "Huambo, zwischen den Füßen Catumbella und Caporello, Benguela" [-12.76667, 15.73333] (Mertens 1926:152, 1937b:7; Loveridge 1947:404). **Benguela:** "Morro de Pundo" [-12.38333, 13.88333] (Parker 1936:129; Loveridge 1947:404); "Catumbella" [-12.43333, 13.55000] (Bocage 1867b:220; Loveridge 1947:404); "Quissange" [-12.43333, 14.05000] (Bocage 1887d:209; Loveridge 1947:404); "Benguela" [-12.58333, 13.41667] (Bocage 1867b:220, 1895a:15; Boulenger 1885:201; Parker 1936:129; Loveridge 1947:404); "Dombe" [-12.95000, 13.10000] (Bocage 1867b:220; Loveridge 1947:404); "Entre Rios" [-13.01667, 14.63333] (Hellmich



MAP 127. Distribution of *Chondrodactylus pulitzerae* in Angola.

1957a:36); “Chivitidi” [-13.01667, 14.63333] (Hellmich 1957a:36); “Cubal” [-13.03333, 14.25000] (Mertens 1937a:7, 1938a:431; Loveridge 1947:404). **Namibe:** “Mossamedes” [-15.20000, 12.15000] (Bocage 1867c:227, 1895a:15; Loveridge 1947:404; Laurent 1964a:37; Ceríaco et al. 2016a:54); “Pico Azevedo” [-15.55000, 12.51667] (Schmidt 1933:5-6; Barbour and Loveridge 1946:164; Loveridge 1947:398, 404; Marx 1959:466; Ceríaco et al. 2016a:54); “Rio Coroca” [-15.78333, 12.06667] (Bocage 1887b:202; Loveridge 1947:404; Ceríaco et al. 2016a:54); “Iona National Park, 9.65 km (by air) west-south-west of Espinheira” [-16.81200, 12.27126] (Ceríaco et al. 2016a:24); “Espinheira” [-16.78639, 12.35799] (Ceríaco et al. 2016a:24); “Omauha Lodge” [-16.19861, 12.40087] (Ceríaco et al. 2016a:24); “Iona National Park, Rio Curoca in Pediva Hot Springs area” [-16.28359, 12.56106] (Ceríaco et al. 2016b:24); “Namibe-Lubango road, road marker 59, 1.8 km west (by road) of Caraculo, on the north side of the road” [-15.01592, 12.64239] (Ceríaco et al. 2016a:24); “Pico Azevedo” [-15.53400, 12.49197] (Ceríaco et al. 2016a:24).

Taxonomic and distributional notes: The genus *Chondrodactylus* was previously considered monotypic (*C. angulifer*) but Bauer and Lamb (2005) demonstrated that a clade of large-bodied geckos, the *Pachydactylus bibronii* group (Lamb and Bauer 2002), is sister to *C. angulifer* and moved these taxa into *Chondrodactylus*. *Pachydactylus bibronii pulitzeriae* was originally described by Schmidt (1933) from “Pico Azevedo” in southern Angola and was long considered a synonym of *P. bibronii* (Smith, 1846) [= *Chondrodactylus bibronii*] (Ceríaco et al. 2014a). Benyr (1995), in an unpublished thesis, clarified the distinction between the more temperate *C. bibronii* and a more tropical *Chondrodactylus laevis* (Fisher, 1888)/*Chondrodactylus turneri* (Gray, 1864) lineage and treated *C. pulitzeriae* as a subspecies of *Chondrodactylus laevis* (see also Lamb and Basuer 2002). Recently, Heinz (2011) demonstrated that *Chondrodactylus pulitzeriae* is a distinct, species-level lineage, occurring in sympatry or at least parapatry with *C. laevis* in southern Angola and in extreme northern Namibia. Most records for this species are in the south-west of Angola in Benguela Province (Schmidt 1933; Parker 1936; Monard 1937b; Mertens 1937a; Hellmich 1957a; Laurent 1964a), although Bocage (1895a) reported it to be common south of the Kwanza in general and cited two specimens from “Loanda” collected by Bayão in 1874. A recent record from Capanda Dam is a northward range extension of the species. It has also recently been recorded Cacuaco, Luanda Province (Ceríaco et al. 2017), suggesting that *C. pulitzeriae* may be more widely distributed throughout the savanna biome of Angola (Ceríaco et al. 2014b). Although cited in the chresonymy, specific localities from the unpublished theses of Benyr (1995) and Heinz (2011) have not been listed above.

Chondrodactylus laevis (Fischer, 1888)

BUTTON-SCALED GECKO

Pachydactylus laevis (Fischer 1888:15, pl. 2, fig. 3). Syntypes: ZMH (not located) (collector J. Steingröver). Type locality: “bei Aus und auf dem Wege nach Bethanien,” [= Aus on the way to Bethanien, Karas Region] Namibia.

Pachydactylus stellatus: Schmidt (1933:5).

Pachydactylus bibronii: Monard (1937b:53).

Pachydactylus bibronii turneri (part): Loveridge (1947:405).

Pachydactylus bibronii pulitzeriae: Hellmich (1957b:49)

Pachydactylus laevis laevis: Benyr (1995:7).

Pachydactylus turneri (part): Branch (1998:254).

Chondrodactylus turneri (part): Heinz (2011:30), Bates et al. (2014:104), Ceríaco et al. (2014b:670).

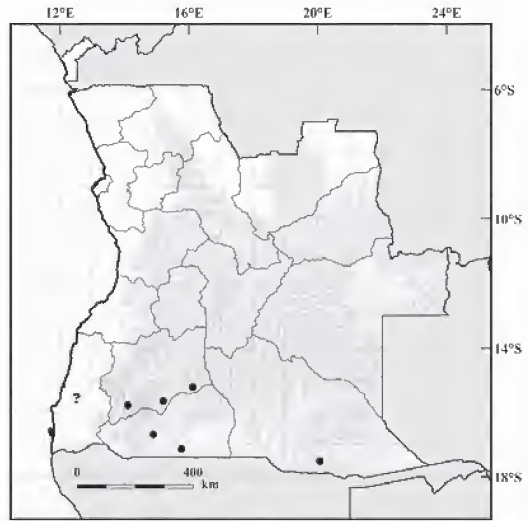
Chondrodactylus cf. *pulitzeriae* (part): Conradie et al. (2016:24).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from the north of the Northern Cape Province, South Africa, throughout Namibia and into southern Angola and north and east as far as southern Kenya.

Occurrences in Angola (Map 128): The species appears to occur in Cunene, Huíla, and Cuando Cubango provinces, with a single questionable record from southern Namibe Province. **Huíla:** “Kampulu (près Kasinga)” [-15.21667, 16.11667] (Monard 1937b:53; Loveridge 1947:407); “Mulondo” [-15.63333, 15.20000] (Schmidt 1933:5; Loveridge 1947:407-409); “Gambos” [-15.76667, 14.10000] (Hellmich 1957b:49). **Cunene:** “Humbi” [-16.68333, 14.90000] (Monard 1937b:53; Loveridge 1947:407); “Mupanda” [-17.13333, 15.76667] (Monard 1937b:53; Loveridge 1947:407). **Quando Cubango:** “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:9); “Cuito basin (62)” [-17.50875, 20.06608] (Conradie et al. 2016:9).

Taxonomic and distributional notes: The genus *Chondrodactylus* was previously considered a monotypic (*C. angulifer*) but Bauer and Lamb (2005) demonstrated that a clade of large-bodied geckos, the *Pachydactylus bibronii* group (Lamb and Bauer 2002), is sister to *C. angulifer* and moved these taxa into *Chondrodactylus*. Benyr (1995) clarified the distinction between the more temperate *Chondrodactylus bibronii* (Smith, 1846) and a more northerly distributed *Chondrodactylus l. laevigatus* (Fisher 1888) and *Chondrodactylus l. turneri* (Gray, 1864). Branch (1998) subsequently used the name *turneri* as a senior synonym of *laevigatus*, correcting Benyr’s oversight of the former name’s priority (Lamb and Bauer 2002; Ceriaco et al. 2014b) when the two are treated as conspecific. Heinz (2011) demonstrated that *C. turneri* and *C. laevigatus* are deeply divergent from one another, but Heinicke et al. (2017) were the first to employ *C. laevigatus* as specifically valid subsequent to its transfer to *Chondrodactylus*. Schmidt (1933) reported *P. stellatus* [syn. *Chondrodactylus laevigatus*] from Pico Azevedo (the type locality of *P. pulitzeriae*), but these specimens are referable to *C. fitzsimonsi* (see account above). Loveridge (1947) erroneously considered Monard’s (1937b) material of *Pachydactylus bibronii* from “Humbi,” “Kampulo,” and “Mupanda” representative of *Chondrodactylus turneri*, a species now not believed to occur in Angola. Although cited in the chresonymy, specific localities from the unpublished theses of Benyr (1995) and Heinz (2011) have not been listed above.



MAP 128. Distribution of *Chondrodactylus laevigatus* in Angola.

Genus *Hemidactylus* Oken, 1817

Hemidactylus angulatus complex Hallowell, 1852

AFRICAN TROPICAL GECKO

Hemidactylus angulatus Hallowell 1852a:63, fig. Holotype: ANSP 7431 (donated by H. Ford). Type locality: “West coast of Africa” [= Gabon] by implication *vide* Loveridge (1947).

Hemidactylus brookii angulatus: Laurent (1964a:29).

Hemidactylus brooki: Spawls et al. (2004:86).

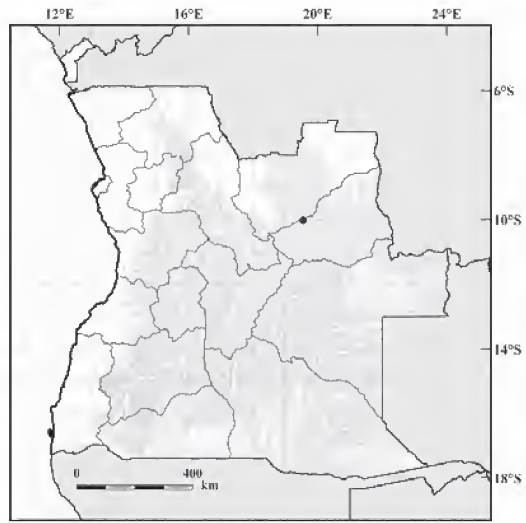
Hemidactylus angulatus: Carranza and Arnold (2006:539), Bauer et al. (2006a:8), Trape et al. (2012:222), Trape et al. (2012:222).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The range of this species extends from Mauritania across much of the Sahel to Sudan and the Horn of Africa and south through East Africa. In Central Africa it extends as far south as northeastern Angola, although records in the region are scattered and its true distribution is uncertain.

Occurrences in Angola (Map 129): The species has been recorded only from “Alto Cuílo,” Lunda Sul Province. **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:29).

Taxonomic and distributional notes: This species was recently elevated to a full species based on molecular evidence that identifies it as a member of a completely different major clade from the Asian *Hemidactylus*



MAP 129. Distribution of *Hemidactylus angulatus* in Angola.

brookii Gray, 1845, under which it was previously subsumed (Carranza and Arnold 2006; Bauer et al. 2006c). Hallowell's type specimen was originally thought to have come from Liberia as the donor was “Mr. Henry Ford of Liberia,” however, the locality was subsequently corrected to Gabon (Loveridge 1947). Loveridge (1947, 1957) considered *Hemidactylus bayonii* Bocage, 1893 a synonym of *H. angulatus* and its type constituted his only Angolan record for this species. However, Laurent (1964a) stated that Loveridge's synonymy was incorrect and reported that the specimen that he identified from “Alto Cuílo” was actually the first *H. angulatus* to be captured in Angola. We recently examined this specimen, but it is in too poor a condition to verify specific identity. Numerous biological species are currently subsumed under the name *H. angulatus* (I. Agarwal et al., unpublished).

Hemidactylus bayonii Bocage, 1893

BAYÃO'S GECKO (Endemic)

Hemidactylus Bayonii Bocage 1893:116. Holotype: MBL specimen number not known (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: “Dondo, sur les bords du Quanza” [= Dondo, near Quanza river edges], Kwanza Norte, Angola.

Hemidactylus bayonii: Bocage (1895a:13, 1897a:193), Frade (1963:252), Laurent (1964a:30).

Hemidactylus brookii angulatus: Loveridge (1947:139, 1957:184).

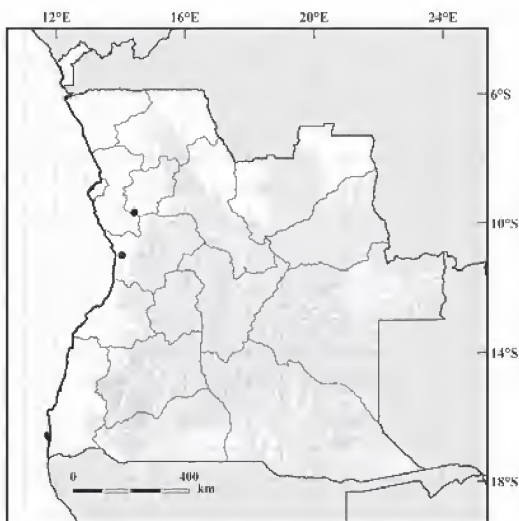
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 130): The species is only known from western regions of the Kwanza watershed. **Kwanza Norte:** “Dondo” [-9.68333, 14.43333] (Bocage 1893:116, 1895a:13, 1897a:193). **Kwanza Sul:** “31 km au nord-est de Novo Redondo” [-11.00000, 14.05000] (Laurent 1964a:30).

Taxonomic and distributional notes: Loveridge (1947, 1957) considered the type specimen of *Hemidactylus bayonii* referable to *H. angulatus*. For some time this species was only known from the type locality, although Laurent (1964a) identified two individuals as *Hemidactylus bayonii* from “Kwanza Sul, 31 km from Novo Redondo”, not far from the type locality. Laurent (1964a) also provided a discussion about Loveridge's (1947) mistaken synonymy of *H. bayonii*

with *Hemidactylus brookii angulatus* Hallowell, 1852. The species was recently recorded from Quiçama National Park in Luanda Province (M. Marques, L. Ceríaco, A. Bauer and D. Blackburn pers. obs. 2015, 2016).



MAP 130. Distribution of *Hemidactylus bayonii* in Angola.

Hemidactylus benguellensis Bocage, 1893

BENGUELA GECKO (Endemic)

Hemidactylus benguellensis Bocage 1893:115. Syntypes: MBL specimen numbers not known (collector J.A. d'Anchieta)", destroyed by fire 18 March 1978. Type locality: "Cahata" [= Caota], Benguela Province, Angola.

Hemidactylus benguellensis: Bocage (1895a:12, 1897a:193), Monard (1937b:52), Frade (1963:252).

Hemidactylus mabouia: Loveridge (1947:170, 1957:185).

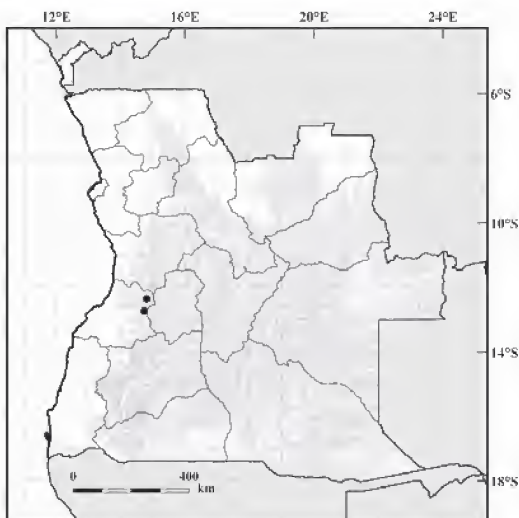
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 131): The species is only known from southwestern regions of the country. **Benguela:** "Cahata" [-12.35000, 14.81667] (Bocage 1893:115, 1895a:12, 1897a:115; Loveridge 1947:170, 1957:185); "Ebanga" [-12.73333, 14.73333] (Monard 1937b:52).

Taxonomic and distributional notes:

This species is generally regarded as a synonym of *Hemidactylus mabouia* (Moreau De Jonnés, 1818) (Loveridge 1947, 1957; Uetz and Hošek 2017). However, *H. mabouia* is itself a complex of species (Bauer et al., unpublished) and we tentatively maintain the validity of *H. benguellensis* until both it and *H. mabouia* can be thoroughly revised.



MAP 131. Distribution of *Hemidactylus benguellensis* in Angola.

Hemidactylus longicephalus* Bocage, 1873*LONG-HEADED TROPICAL GECKO**

Hemidactylus longicephalus Bocage 1873b:210. Syntypes: MBL specimen numbers not known (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: "l'intérieur de Mossamedes (Capangombe)" and "Catumbella, près Benguella" [= Capangombe (Namibe Province) and Catumbella (Benguela Province)], Angola.

Hemidactylus platycephalus: Bocage (1866a:42, 1866b:60, 1870:68; 1873b:209).

Hemidactylus bocagei: Boulenger (1885:125), Bocage (1895a:11, 1897a:193), Ferreira (1904:117).

Hemidactylus longicephalus: Bocage (1887a:178), Schmidt (1933:4), Parker (1936:128), Hellmich (1957b:49), Manaças (1963:227), Loveridge (1947:187), Laurent (1964a:30), Ceriaco et al. (2014b:671), Ceriaco et al. (2016a:54).

Hemidactylus bocagei: Ferreira (1906:170).

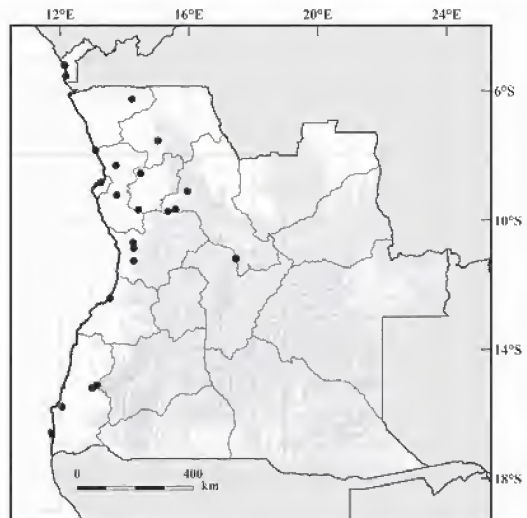
Hemidactylus mabouia: Loveridge (1947:167).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from West Africa from Cameroon to Angola south into northern Namibia.

Occurrences in Angola (Map 132): The species is known from throughout the western regions of the country. **Cabinda:** "Landana" [-5.21667, 12.15000] (Loveridge 1947:189); "Cabinda" [-5.55000, 12.18333] (Bocage 1866a:42, 1866b:60, 1895a:11, 1897a:193). **Zaire:** "S. Salvador do Congo" [-6.26667, 14.23333] (Bocage 1887a:178, 1895a:11; Loveridge 1947:189). **Uíge:** "Fazenda Otilia-Encoge, Quitexe" [-7.55000, 15.03333] (Manaças 1963:227). **Luanda:** "Loanda" [-8.83333, 13.26667] (Bocage 1866a:42, 1866b:60). **Bengo:** "Ambriz" [-7.844312, 13.106493] (Boulenger 1885:125; Bocage 1895a:11; Loveridge 1947:189); "Minas de Quizambil, Dande" [-8.31667, 13.73333] (Manaças 1963:227); "Cunga" [-9.23333, 13.76667] (Ferreira 1904:117; Loveridge 1947:189). **Kwanza Norte:** "Piri-Dembos" [-8.56667, 14.50000] (Hellmich 1957b:49); "Dondo" [-9.68333, 14.43333] (Bocage 1873b:209).

Kwanza Sul: "Quirimbo" [-10.68333, 14.26667] (Parker 1936:128; Loveridge 1947:189); "Congulu" [-10.86667, 14.28333] (Parker 1936:128; Loveridge 1947:189); "Gumba" [-11.26667, 14.28333] (Ferreira 1904:117; Loveridge 1947:189). **Malanje:** "Duque de Bragança" [-9.10000, 15.95000] (Bocage 1895a:11, 1897a:193; Loveridge 1947:189); "Pungo-Andongo" [-9.66667, 15.58333] (Boulenger 1885:125; Bocage 1895a:11; Loveridge 1947:189); "Capanda" [-9.72841, 15.34585] (Ceriaco et al. 2014b:671). **Bié:** "Gauca" [-11.18333, 17.45000] (Schmidt 1933:4; Loveridge 1947:189). **Benguela:** "Catumbella" [-12.43333, 13.55000] (Bocage 1873b:209, 1895a:11, 1897a:193; Loveridge 1947:189). **Huíla:** "Fazenda Bumbo, Humpata" [-15.20000, 13.00000] (Laurent 1964a:30). **Namibe:** "Capangombe" [-15.10000, 13.15000] (Bocage 1873b:209, 1895a:11, 1897a:193; Loveridge 1947:189; Ceriaco et al. 2016a:54); "Rio Coroca" [-15.78333, 12.06667] (Bocage, 1895a:11, 1897a:193; Loveridge 1947:189; Ceriaco et al. 2016a: 54). **Undetermined Locality:** "Carangigo" (Boulenger 1885:125; Bocage 1895a:11; Loveridge 1947:189); "Cuanza River" (Loveridge 1947:189).



MAP 132. Distribution of *Hemidactylus longicephalus* in Angola.

Taxonomic and distributional notes: In the original description Bocage identified the species as *Hemidactylus platycephalus*, however, at the end of the description he mentioned that he had provisionally registered the species in the Museum catalogue under the name *Hemidactylus longicephalus*. Perret (1975) believed that *H. longicephalus* Bocage, 1873 was a junior synonym of *H. muriceus* Peters, 1870 (see below), but he had been unable to see the type of the former to confirm this. *Hemidactylus bocagii* Boulenger 1885 was recognized as valid for Angolan specimens by Bocage (1895a, 1897a) and Ferreira (1904, 1906), although this name was synonymized by Loveridge (1947). The taxonomy of *H. longicephalus* is unstable and several names that are currently placed in its synonymy require further investigation. This species is broadly sympatric with the rather similar *Hemidactylus mabouia* (Moreau De Jonnès, 1818), throughout much of its range in Angola (Ceriaco et al. 2014a).

Hemidactylus mabouia (Moreau De Jonnès, 1818)

TROPICAL HOUSE GECKO

Gecko Mabouia Moreau de Jonnès, 1818:138. Holotype: MHNP 6573. Type locality: “en Amérique, dans les contrées continentales qui avoisinent au midi l’archipel des Antilles, et qu’il est également répandu dans les îles même de l’archipel, depuis la Trinité jusqu’à la Jamaïque. “ Restricted to “St. Vincent” [Lesser Antilles] by Stejneger (1904:600).

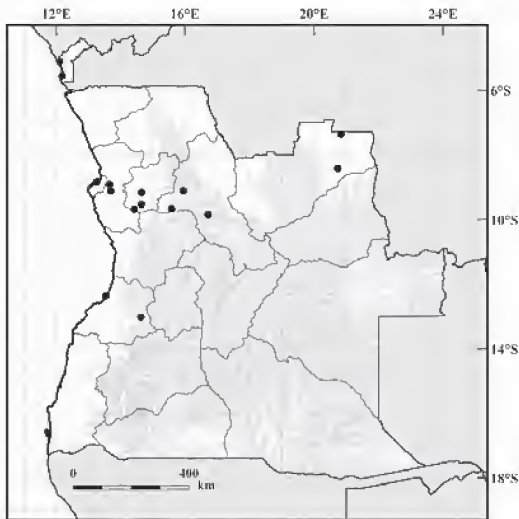
Hemidactylus mabouia: Peters (1877a:612), Boulenger (1885:122, 1905:110), Bocage (1895a:10), Ferreira (1904:117, 1906:170), Parker (1936:128), Loveridge (1947:167, 1957:185), Hellmich (1957a:34), Laurent (1950a:12, 1954a:63, 1964a:29), Kluge (1969:28), Spawls et al. (2004:88), Bates et al. (2014:114), Branch and Conradie (2015:200), Ceriaco et al. (2016b:59).

Hemidactylus mabouia mabouia: Chirio and LeBreton (2007:118).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from almost all sub-Saharan Africa regions, although it is absent from more arid and temperate areas except under anthropogenic conditions. It is also currently found in North, Central and South America and in the Caribbean, where it is an anthropophilic invasive (Kraus 2009).

Ocurrences in Angola (Map 133): The species occurs mainly in northern Angola, but also along the coast, including the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:612; Bocage 1895a:10; Loveridge 1947:179); “Cabinda” [-5.55000, 12.18333] (Bocage 1895a:10; Loveridge 1947:179). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:12, 1964a:29); “Carumbo, Lucapa” [-8.42278, 20.73917] (Branch and Conradie 2015:200). **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1895a:10; Loveridge 1947:179; Hellmich 1957a:34). **Bengo:** “Cabiri” [-8.91667, 13.66667] (Ferreira 1903:117; Loveridge 1947:179); “Catete” [-9.11667, 13.70000] (Ferreira 1903:117; Loveridge 1947:179). **Kwanza Norte:** “Cambondo” [-9.15963, 14.65827] (Ferreira:1906:170; Loveridge 1947:179); “Mucoso bei Dondo” [-9.53333, 14.65000] (Hellmich 1957a:34); “Dondo” [-9.68333, 14.43333] (Bocage 1895a:10; Love-



MAP 133. Distribution of *Hemidactylus mabouia* in Angola.

ridge 1947:179). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1895a:10; Loveridge 1947:179); “Pungo-Andongo” [-9.66667, 15.58333] (Boulenger 1905:110; Loveridge 1947:179); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:59). **Benguela:** “Lobito” [-12.35000, 13.55000] (Parker 1936:128; Loveridge 1947:179; Laurent 1954a:63); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:34). **Undetermined Locality:** “Carangigo” (Boulenger 1885:122; Loveridge 1947:179); “Serra de Stombe” (Ferreira 1903:117; Loveridge 1947:179).

Taxonomic and distributional notes: The type locality of *H. mabouia* was initially restricted to “Antilles” by A. Duméril in Duméril and Duméril (1851) and then more precisely to “St. Vincent” by Stejneger (1904). However, as noted by Kluge (1969), the holotype, which he believed was actually collected in Catragena, Colombia, is not conspecific with the gecko now typically regarded as *H. mabouia*, and would appear to be a specimen of *H. angulatus* (Carranza and Arnold 2006). Kluge recommended the maintenance of prevailing usage of the name. *Hemidactylus mabouia* as currently recognized includes several synonyms. However, it is known to be part of a complex of many species and the taxonomy of the complex is in flux. In Angola, *H. mabouia* is broadly sympatric with the rather similar *Hemidactylus longicephalus* Bocage, 1873 throughout much of its range (Ceriaco et al. 2014b). Kluge (1969) mapped several Angolan localities, but did not provide specific localities.

Hemidactylus cf. *muriceus* Peters, 1870

GUINEAN SPINY TROPICAL GECKO

Hemidactylus muriceus Peters 1870:641. Holotype: ZMB 6921 (collector R. Schomburgk). Type locality: “Keta (Guinea)” [= Keta, Ghana].

Hemidactylus muriceus: Peters (1881:147), Bocage (1895a:13), Henle and Böhme (2003:33), Bauer et al. (2006a:10).

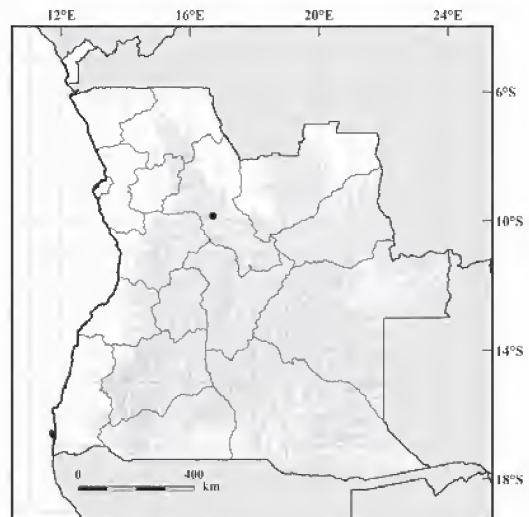
Hemidactylus cf. *muriceus*: Ceriaco et al. (2016b:59).

Global conservation status (IUCN): Not Evaluated.

Global distribution: This species occurs in West Africa forests, from Ghana to Cameroon, east to the Central African Republic and south to northern Angola.

Occurrences in Angola (Map 134): The species is known from northcentral Angola. **Malanje:** “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:59). **Undetermined Locality:** “Cuango = Quango” (Peters 1881:147; Bocage 1895a:13) (Malanje Province impossible to georeference: See History Section for more detailed information).

Taxonomic and distributional notes: The type was incorrectly cited as ZMB 69201 by Perret (1975). According to Perret (1975), Henle and Böhme (2003) and Bauer et al. (2006a) *Hemidactylus muriceus* Peters, 1870 has frequently been confused with other species. Perret (1975) attributed the confusion to Tornier’s (1902) use of the name for *H. intestinalis* Werner, 1897, which he considered as senior synonym of *H. ansorgii*



MAP 134. Distribution of *Hemidactylus* cf. *muriceus* in Angola.

Boulenger, 1901. However, Henle and Böhme (2003) have argued that *H. intestinalis* is indeed a synonym of *H. muriceus*, and that *H. ansorgii* is the name applicable to another species. Perret (1975) also believed that *H. longicephalus* Bocage, 1873 was a junior synonym of *H. muriceus*, but he had been unable to see the type of the former to confirm this. Because of those frequent misidentifications, literature records for the species are in many cases unreliable. The identity of Angolan specimens is unclear but they are probably not referable to *H. muriceus sensu stricto*.

Genus *Kolekanos* Heinicke, Daza, Greenbaum, Jackman and Bauer, 2014

Kolekanos plumicaudus (Haacke, 2008)

FEATHER-TAILED GECKO (Endemic)

Afrogecko plumicaudus Haacke 2008:86, figs. 1–3. Holotype: TM 40527 (collector W.D. Haacke). Type locality: “Tambor (= turn-off of track to the south towards the Curoca River crossing into the Iona Park and the Kunene River mouth, marked by an empty 200 litre drum),” Namibe Province, Angola.

Afrogecko plumicaudus: Mashinini and Mahlangu (2013:167), Bates et al. (2014:100), Ceriaco et al. (2016a:55).

Kolekanos plumicaudus: Heinicke et al. (2014:27), Agarwal et al. 2017:649.

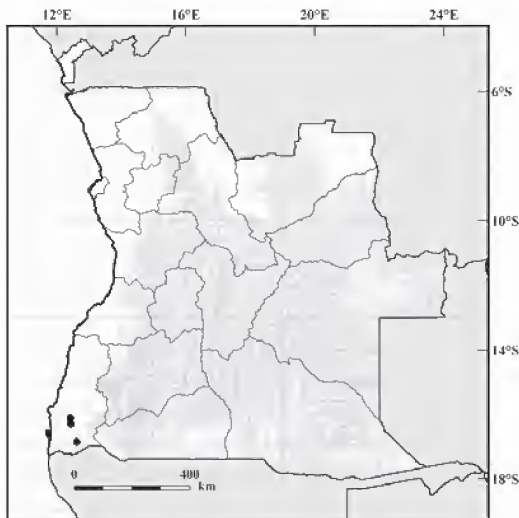
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Ocurrences in Angola (Map 135): The species is only known from the type locality “Tambor” and neighboring areas in Namibe Province, Southwest Angola. **Namibe:** “Tambor (= turn-off of track to the south towards the Curoca River crossing into the Iona Park and the Kunene River mouth, marked by an empty 200 litre drum” [-16.13333, 12.41667] (Haacke 2008:86; Mashinini and Mahlangu 2013:167; Ceriaco et al. 2016a:55); “Curoca River crossing (N bank)” [-16.30000, 12.43333] (Haacke 2008:86; Ceriaco et al. 2016a:55); “8 km / 11 km E of Iona, along track towards Oncocua, Parque Nacional do Iona” [-16.85972, 12.61111] (Haacke 2008:86, 90; Heinicke et al. 2014:27, 38; Ceriaco et al. 2016a:55); Omahua” [-16.199642, 12.39877] (Agarwal et al. 2017:649).

Taxonomic and distributional notes:

Heinicke et al. (2014) assigned *A. plumicaudus* to a new genera *Kolekanos*, which is readily distinguished from all other genera of African leaf-toed geckos based on its uniquely flattened tail with pointed lateral projections. This species is restricted to granite boulders on grassy, sandy plains with stunted *Acacia mellifera* thornbush (Haacke 2008; Agarwal et al. 2017).



MAP 135. Distribution of *Kolekanos plumicaudus* in Angola.

Genus *Lygodactylus* Gray, 1864

Lygodactylus angolensis Bocage, 1896

ANGOLA DWARF GECKO

Lygodactylus angolensis Bocage 1896a:110. Syntypes: MBL (2 specimens) specimen numbers not known (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Hanha, Benguela,” Benguela Province, Angola.

Lygodactylus laurae Schmidt (1933:4). Holotype: CM 5860 (collector R. and L. Boulton). Type locality: “Chitau,” Bié Province, Angola.

Lygodactylus capensis: Bocage (1895a:15), Laurent (1964a:31).

Lygodactylus angolensis: Bocage (1870:68, 1873b:209, 1897a:193), Loveridge (1947:207, 1957:187), Hellmich (1957a:35), Pasteur (1964:56), Branch (1998:245), Broadley and Cotterill (2004:41), Ceriaco et al. (2016b:57).

Lygodactylus laurae: Mertens (1937a:6), Barbour and Loveridge (1946:147); Marx (1959:464), McCoy and Richmond (1966:154).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The distribution of *Lygodactylus angolensis* is poorly known in much of its range. It occurs from southern and central Angola east through Zambia, the former Katanga Province of the Democratic Republic of Congo, northern Zimbabwe, northern and western Mozambique and Malawi to scattered localities in Tanzania and southern Kenya.

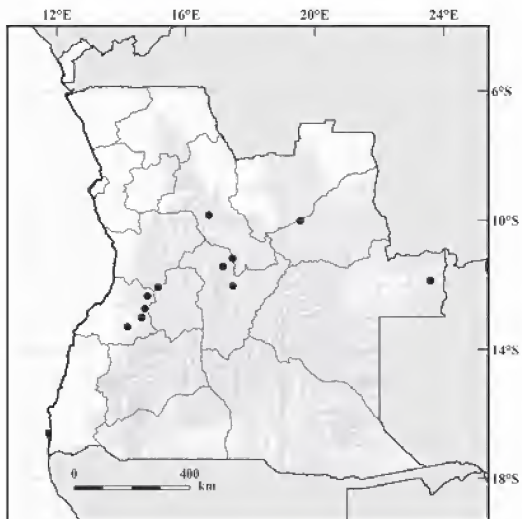
Occurrences in Angola (Map 136): *Lygodactylus angolensis* is known from widely scattered localities across the interior of Angola.

Malanje: “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:57).

Lunda Sul: “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:31). **Moxico:** “Falls of Luisavo, Poste de Calunda” [-11.86667, 23.58333] (Laurent 1964a:31). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1933:4; Loveridge 1947:208 Marx 1959:464); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:4; Barbour and Loveridge 1946:147; Loveridge 1947:208, 1957:187; Pasteur 1964:56; McCoy and Richmond 1966:154); “Farm Goedecke on Conjo, 25 km north of General Machado (= Camacupa)” [-12.03333, 17.46667] (Mertens 1937a:6; Loveridge 1947:208).

Huambo: “Galanga” [-12.06667, 15.15000] (Bocage 1897a:193; Loveridge 1947:208). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:15, 1897a:193; Monard 1937b:53; Loveridge 1947:208); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:53; Loveridge 1947:208); “Hanha” [-13.01667, 14.63333] (Bocage 1896a:110, 1897a:193; Loveridge 1947:208); “Entre Rios” [-13.30000, 14.20000] (Hellmich 1957a:35).

Taxonomic and distributional notes: Some citations to the name of *Lygodactylus capensis* (Bocage 1895a; Laurent 1964a) were later transferred to the synonymy of *L. angolensis*. Pasteur (1964) provided a map (his fig. 15) depicting records for *Angolensis*, which indicates its wide range from the inland southwest of Angola, where it may be sympatric with *Lygodactylus capensis* (Smith, 1849). He also provided data on scale variation in this species. Recently, several individuals of *L. angolensis* were collected in Cangandala National Park, Malanje Province (Ceriaco et al. 2016b), which confirms its northern extent in the country.



MAP 136. Distribution of *Lygodactylus angolensis* in Angola.

Lygodactylus bradfieldi Hewitt, 1932

BRADFIELD'S DWARF GECKO

Lygodactylus bradfieldi Hewitt 1932:126, pl. 6, fig. 10. Syntypes: originally deposited at Albany Museum, now including BMNH 1946.8.30.69, MCZ R-33443 (collector R.D. Bradfield), PEM R14574-82, R14586-92. PEM material incorrectly reported as lost by De Lisle et al. (2013). Type locality: “farm Quickborn near Okahandja,” Namibia.

Lygodactylus capensis: Bocage (1895a:15), Loveridge (1947:208).

Lygodactylus capensis capensis: Schmidt (1933:4)

Lygodactylus bradfieldi: Branch (1998:246), Bates et al. (2014:117), Conradie et al. (2016:24).

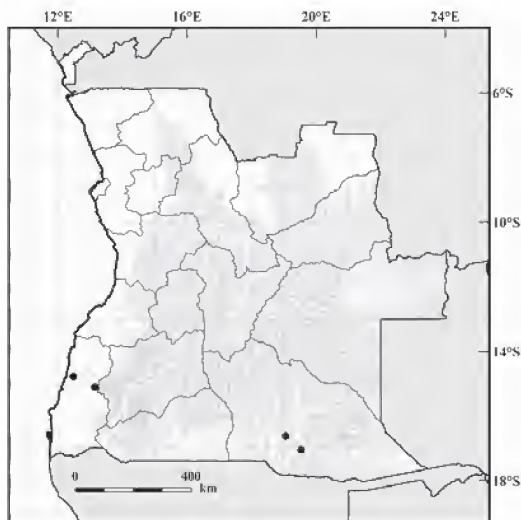
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Northern Cape through Namibia to southern Angola and northwestern Botswana, with an apparently isolated population in northwestern Limpopo Province (Branch 1998; Bates et al. 2014).

Occurrences in Angola (Map 137): Presumably restricted to Namibe Province. **Namibe:** “Mucungu” [-14.78333, 12.48333] (Schmidt 1933:4; Loveridge 1947:212); “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:15). **Quando Cubango:** “Cuito basin (32)” [-17.04880, 19.53333] (Conradie et al. 2016:9, 11, 24); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9,11, 24).

Taxonomic and distributional notes:

Lygodactylus bradfieldi Hewitt, 1932 was for some time treated as a western race of *L. capensis*, although Pasteur (1964) revived it as a full species. Pasteur (1964) considered Angolan and northeastern Namibian records to be referable to *L. capensis* Smith, 1849, however, records assigned to *L. capensis* from “Mucungu” (Schmidt 1933; Loveridge 1947) and “Capangombe” (Bocage 1895a), Namibe Province may belong to *L. bradfieldi* given the species distribution and adaptation to arid savanna habitats. Recently, Conradie et al. (2016) collected three specimens that correspond to *L. bradfieldi* from Cuíto drainage, in Cuando Cubango Province. Namibian and Angolan specimens assigned to both *L. bradfieldi* and *L. capensis* require reexamination to confirm the species boundaries.



MAP 137. Distribution of *Lygodactylus bradfieldi* in Angola.

Lygodactylus capensis (Smith, 1849)

CAPE DWARF GECKO

Hemidactylus capensis Smith 1849: pl. 75, fig. 3 and two associated unnumbered text pages. Syntypes: lost *vide* FitzSimons (1937) (collector A. Smith). Type locality: “Kaffirland, and the districts to the north of Cape Colony,” South Africa.

Hemidactylus capensis: Bocage (1867b:219, 1870:68).

Lygodactylus capensis: Bocage (1895a:15), Monard (1937b:53), Loveridge (1947:208, 1957:187), Frade (1963:253), Pasteur (1964:62), Branch (1998:246).

Lygodactylus capensis capensis: Bates et al. (2014:118).

Global conservation status (IUCN): Not Evaluated.

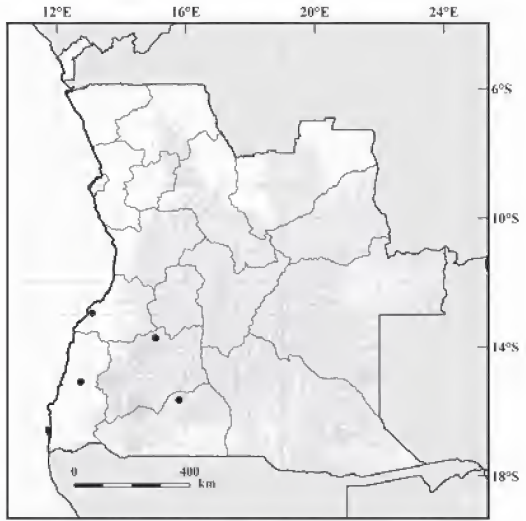
Global distribution: The species is known from chiefly savanna habitats of central and southern Africa, from warmer regions of South Africa north to Tanzania in the east and southern Angola in the west. Isolated records exist from southern Kenya and the south central Democratic Republic of Congo.

Occurrences in Angola (Map 138): Published records for *Lygodactylus capensis* are from the southwestern provinces of Angola. **Benguela:** “Dombe” [-12.95000, 13.10000] (Bocage

1867b:219, 1895a:15; Monard 1937b:53; Loveridge 1947:212). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:15; Monard 1937b:53; Loveridge 1947:212). **Cunene:** “Kuvelai, Kasinga” [-15.65000, 15.80000] (Monard 1937b:53; Loveridge 1947:212). **Namibe:** “Chiyaka district” [-15.08333, 12.73333] (Loveridge 1947:212).

Taxonomic and distributional notes:

Pasteur (1964) provided a map (his fig. 15) showing the distribution of this species and provided data on scale variation and comparisons with *L. angolensis*, which he regarded as a member of the same species group. The species *L. grotei* Sternfeld, 1911 was previously considered a subspecies of *L. capensis* (e.g., Pasteur 1964), which it replaces in the lowlands of Mozambique and Tanzania. Genetic data indicate that there are multiple undescribed species within the *L. capensis* complex (Travers 2012) and extensive taxonomic work will be necessary to delimit species in the group as a whole. Isolated records from southern Kenya and the Democratic Republic of Congo especially require investigation.



MAP 138. Distribution of *Lygodactylus capensis* in Angola.

***Lygodactylus chobiensis* FitzSimons, 1932**

OKAVANGO DWARF GECKO

Lygodactylus picturatus chobiensis FitzSimons 1932:35. Holotype: TM 14580 (collector V.F. FitzSimons).

Type locality: “Kabulabula, Chobe River,” Botswana.

Lygodactylus chobiensis: Pasteur (1964:77), Haacke (1970:279), Branch (1998:247), Broadley and Martiz (2010).

Global conservation status (IUCN): Least Concern.

Global distribution: The species extends from the southeast of Angola and adjacent Namibia and northern Botswana to western Mozambique, northern Zimbabwe and southeastern Zambia. There is an apparently isolated population in northern Mozambique (Broadley and Martiz 2010a).

Occurrences in Angola: The species occurs in Angola, probably in both Moxico and Cuando Cubango provinces (see notes below).

Taxonomic and distributional notes: Despite the lack of precise published locality records for *Lygodactylus chobiensis* from Angola, the currently accepted distribution for the species includes portions of Angola (Haacke 1970; Branch 1998; Broadley and Martiz 2010). Pasteur (1964) provided a provisional map of the distribution of the species from *Lygodactylus picturatus* group and noted that the species probably occurs in the most eastern areas of Moxico Province, Angola, adjacent to the border with Zambia. It may also be expected in at least southeastern Cuando Cubango as there are records nearby in the neighboring Caprivi Strip of Namibia. New surveys and acquisition of new fresh material is absolutely required to clarify *L. chobiensis* distribution.

***Lygodactylus lawrencei* Hewitt, 1926**

LAWRENCE’S DWARF GECKO

Lygodactylus lawrencei Hewitt 1926b:478. Holotype: SAM 17289 (collector R. F. Lawrence). Type locality:

“Otjitambi, Kaokoveld, S.W.A.” Kamanjab Constituency, Kunene Region, Namibia.

Lygodactylus lawrencei: Pasteur (1964:70), Branch (1998:247).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from northwestern Namibia and adjacent southwestern Angola.

Occurrences in Angola: The species occurs in southwestern regions of Angola, near the border with Namibia, but there are no precise published records.

Taxonomic and distributional notes: *Lygodactylus lawrencei* is a species of rocky, dry savannas from the Kaokoveld regions in northern Namibia, extending into southern Angola (Branch 1998). New surveys and acquisition of new material are absolutely required to clarify the range of *L. lawrencei* in Angola, given the lack of precise published locality records for this species in the country.

Genus *Pachydactylus* Wiegmann, 1834

Pachydactylus angolensis Loveridge, 1944

ANGOLAN THICK-TOED GECKO (Endemic)

Pachydactylus scutatus angolensis (Loveridge 1944a:3). Holotype: AMNH 47874 (collectors A. Vernay, H. Lang and R. Boulton). Type locality: “Hanha, Benguela Province,” Angola.

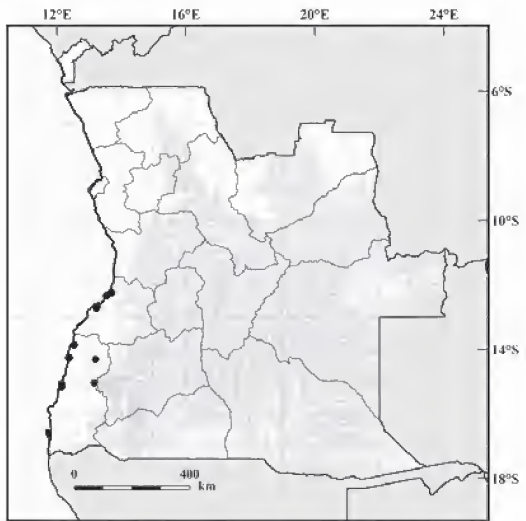
Pachydactylus scutatus angolensis: Barbour and Loveridge (1946:165), Loveridge (1947:357), Laurent (1964a:37).

Pachydactylus angolensis: Bauer et al. (2002a:26), Bauer and Lamb (2005:116), Bauer (2010:265); Heinicke et al. (2017:12), Ceriaco et al. (2016a:25), Branch et al. (2017:163).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is only known from Angola. Presumptive specimens from Namibia have been determined to be *P. parascutatus* Bauer, Lamb and Branch, 2002.

Occurrences in Angola (Map 139): The species occurs broadly in southwestern Angola, below the escarpment. **Benguela:** “Lobito bay” [-12.35000, 13.55000] (Loveridge 1944:3; Bauer et al. 2002a:23); “Hanha, Benguela” [-12.24500, 13.70750] (Loveridge 1944:3; Barbour and Loveridge 1946:165; Bauer et al. 2002a:23; Bauer 2010:265; Branch et al. 2017:163); “24 km S Benguela” [-12.69747, 13.25222] (Bauer 2010:265; Branch et al. 2017:163); “30 km N of Dombe Grande” [-12.73097, 13.23024] (Bauer 2010:265; Branch et al. 2017:163). **Namibe:** “Lucira” [-13.86667, 12.53333] (Bauer 2010:265; Ceriaco et al. 2016a:55; Branch et al. 2017:163); “San Nicolau” [-14.26667, 12.36667] (Bauer 2010:265; Ceriaco et al. 2016a:55); “Lungo” [-14.31667, 13.20000] (Bauer 2010:265; Ceriaco et al. 2016a:55; Branch et al. 2017:163); “Bentiaba” [-14.26667, 12.38333] (Branch et al. 2017:163); “Saco de Giraul” [-15.06833, 12.14222] (Bauer 2010:265; Ceriaco et al. 2016a:55; Branch et al. 2017:163); “environs de Moçâmedes (au bord de la route de Sá da Bandeira et dans le plateau littoral de la Plage das Conchas)” [-15.16667, 12.15000] (Laurent 1964a:37; Ceriaco et al. 2016a:55); “Namibe-Lubango road, 2 km E (by road) of Mangueiras, south side of the road” [-15.04361, 13.16000] (Ceriaco et al. 2016a:25; Branch et al. 2017:163).



MAP 139. Distribution of *Pachydactylus angolensis* in Angola.

Taxonomic and distributional notes: Bauer et al. (2002a) re-examined the types of *P. s. angolensis* and revised the *P. scutatus* group, revalidating *P. angolensis* as a full species, although closely allied to *P. scutatus*. Bauer and Lamb (2005) did not include the species in their phylogenetic analyses of southern African *Pachydactylus*, but they suggested that it was a member of the “northwestern clade.” This has recently been verified by Heinicke et al. (2011), who subsequently (Heinicke et al. 2017) identified a sister group relationship between *P. angolensis* and *P. caraculicus* FitzSimons, 1959. Ongoing molecular work has identified putative species-level diversity within the species.

***Pachydactylus caraculicus* FitzSimons, 1959**

ANGOLA BANDED THICK-TOED GECKO

Pachydactylus caraculicus FitzSimons 1959:407. Holotype: TM 22880 (collector C. Koch). Type locality: “Caracul, S. Angola” [= Caraculo, Namibe Province, Angola].

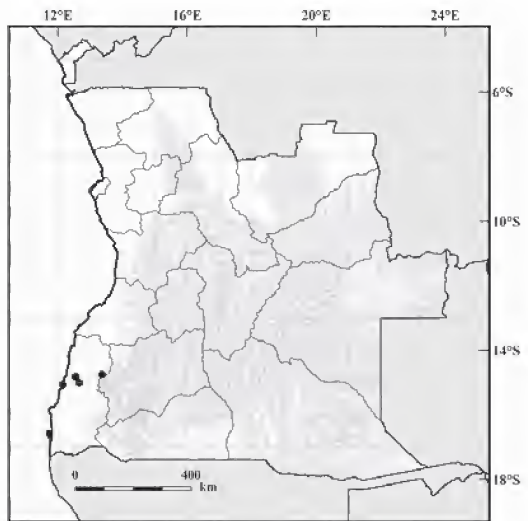
Pachydactylus angolensis: Laurent (1964a:37), Haacke (1970:280), Branch (1998:253), Bauer and Lamb (2005:116), Bauer et al. (2002a:12), Bauer (2010:266), Heinicke et al. (2017:12), Mashinini and Mahlangu (2013:174); Ceriaco et al. (2016a:55).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southwestern Angola and northwestern Namibia.

Occurrences in Angola (Map 140): The species is known from the type locality “Caraculo” and nearby areas in Namibe Province. **Namibe:** “Lungo, Vila Arriaga district, S. Angola” [-14.76667, 13.36667] (FitzSimons 1959:407; Ceriaco et al. 2016a:55); “36 mi northwest of Mocamedes [Namibe]” [-14.82533, 12.54417] (Bauer 2010:266; Ceriaco et al. 2016b:55); “Caracul, S. Angola” [-15.01667, 12.66667] (FitzSimons 1959:407; Haacke 1970:280; Mashinini and Mahlangu 2013:174; Ceriaco et al. 2016a:55); “Cima, Giraul River district” [-15.06667, 12.15000] (FitzSimons 1959:407; Ceriaco et al. 2016a:55).

Taxonomic and distributional notes: In the original description, FitzSimons (1959) considered *Pachydactylus caraculicus* to be geographically and phylogenetically intermediate between *Pachydactylus scutatus angolensis* Loveridge, 1944 (= *Pachydactylus angolensis*) and *Pachydactylus scutatus scutatus* Hewitt, 1927. However, this interpretation was challenged by Laurent (1964a) who noted that *P. s. angolensis* occurs in sympatry with *P. caraculicus* in southern Angola, and therefore must be specifically distinct (Bauer et al. 2002a). Bauer and Lamb (2005) and Heinicke et al. (2011) provided phylogenetic analyses that demonstrated that *P. caraculicus* is part of a diverse, primarily rupicolous “northwestern clade” of *Pachydactylus*, and this has been verified by Heinicke et al. (2017), who identified a sister group relationship of *P. caraculicus* with *P. angolensis* Loveridge, 1944.



MAP 140. Distribution of *Pachydactylus caraculicus* in Angola.

***Pachydactylus oreophilus* complex McLachlan and Spence, 1967 KAOKOLAND ROCK GECKO**

Pachydactylus oreophilus McLachlan and Spence 1967:4, figs.1–2. Holotype: PEM 1503/67 [now PEM R1921] (collectors G.R. McLachlan and J.M. Spence). Type locality: “20 miles West of Sesfontein,” Kunene Region, Namibia.

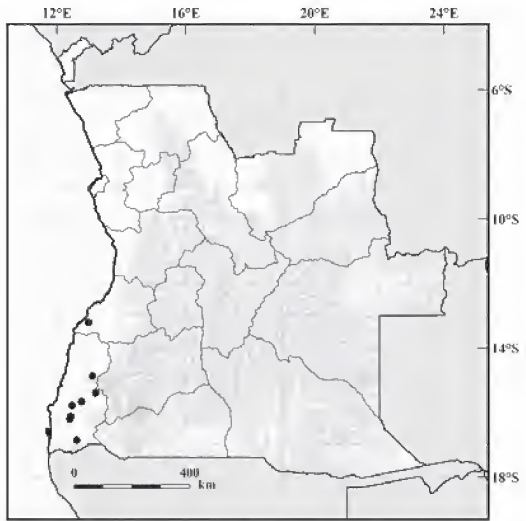
Pachydactylus oreophilus: Branch (1998:258), Bauer and Lamb (2005:116), Bauer (2010:266), Heinicke et al. (2011:12), Herrmann and Branch (2012:98).

Pachydactylus cf. *oreophilus*: Ceriaco et al. (2016a:26, 55).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from northwestern Namibia and southwestern Angola.

Occurrences in Angola (Map 141): The species occurs in Namibe Province and in the arid southwest of Benguela Province. **Benguela:** “35 km S Dombe Grande towards Lucira” [-13.20979, 12.98017] (Bauer 2010:266). **Namibe:** “Assuñcao” [-14.86667, 13.10000] (Bauer 2010:266; Ceriaco et al. 2016a:55); “Caraculo” [-15.01667, 12.66667] (Bauer 2010:266; Ceriaco et al. 2016b:55); “20 km W Virei” [-15.66667, 12.76667] (Bauer 2010:266; Ceriaco et al. 2016a:55); “6 km S Rio Coroca towards Iona” (Bauer 2010:266; Ceriaco et al. 2016a:55); “Saiona River, 25 km NW Caine” [-15.40000, 13.20000] (Bauer 2010:266; Ceriaco et al. 2016a:55); “Mutiambo River on road to Lucira” [-15.78333, 12.46667] (Bauer 2010:266; Ceriaco et al. 2016a:55); “Tambor” [-16.13556, 12.42972] (Bauer 2010:266; Ceriaco et al. 2016a:55); “7 km from Iona towards Oncocau, Iona Reserve” [-16.85831, 12.61275] (Bauer 2010:266; Ceriaco et al. 2016a:55); “Furnas” (Bauer 2010:266; Ceriaco et al. 2016a:55); “Omauha Lodge” [-16.19861, 12.40087] (Ceriaco et al. 2016a:26).



MAP 141. Distribution of *Pachydactylus oreophilus* in Angola.

Taxonomic and distributional notes: Bauer and Lamb (2005) and Heinicke et al. (2011, 2017) demonstrated that *P. oreophilus* belongs to the diverse, largely rupicolous “northwestern clade” of *Pachydactylus*. Specimens currently allocated to this taxon, in fact, represent a non-monophyletic group of superficially similar forms (Bauer et al., unpublished), with *P. oreophilus sensu stricto* limited to Namibia. There are further species level differences among the Angolan populations (Bauer et al., unpublished).

Pachydactylus punctatus* complex Peters, 1854*SPECKLED THICK-TOED GECKO**

Pachydactylus punctatus Peters 1854:615. Lectotype: ZMB 4799, designated by Loveridge (1947:354) by implication (see Bauer and Günther 1991:294). Type locality: “Sena und Tette” [= Sena and Tete], Mozambique, restricted to “Tete” by implication *vide* Bauer et al. (1995:55).

Pachydactylus ocellatus: Bocage (1867b:220, 1895a:16), Boulenger (1885:205, 1905:110), Frade (1963:253).

Pachydactylus serval: Monard (1931:90, 1937b:54).

Pachydactylus punctatus brunnthaleri: Schmidt (1933:5).

Pachydactylus punctatus punctatus: Loveridge (1947:352), Laurent (1954a:63, 1964a:36), Hellmich (1957a:37).

Pachydactylus amoenoides: Laurent (1964a:36).

Pachydactylus punctatus: Bauer and Branch (1995a:70), Branch (1998:259), Bauer et al. (2006b:646), Bauer (1999:57), Bates et al. (2014:130), Ceriaco et al. (2016a:26, 55).

Global conservation status (IUCN): Not Evaluated.

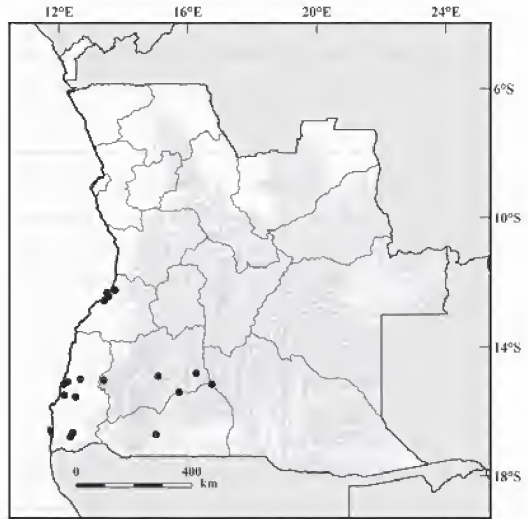
Global distribution: The species as presently construed is widespread across southern Africa from the northwest and northeast of South Africa north to Malawi, the former Katanga Province of the Democratic Republic of Congo, and southern Angola.

Occurrences in Angola (Map 142): Published species records are from southwestern Angola, but members of this clade also occur in parts of central and southeastern Angola.

Benguela: “Hanha” [-12.25000, 13.75000] (Bauer and Branch 1995a:82), “Lobito” [-12.33333, 13.50000] (Laurent 1954a:63, 1964a:36; Bauer and Branch 1995a:82); “Catumbella” [-12.43333, 13.55000] (Bocage 1895a:16; Loveridge 1947:356); “Benguella” [-12.58333, 13.41667] (Bocage 1867b:220, 1895a:16; Boulenger 1885:205; Loveridge 1947:356). **Huíla:** “Indungu” [-14.81667, 16.26667] (Monard 1937b:54); “Capelongo” [-14.91667, 15.08333] (Bauer and Branch 1995a:82); “Humpata, environs de Sá da Bandeira” [-15.03333, 13.40000] (Laurent 1964a:36); “Kului” [-15.41667, 15.73333] (Monard 1937b:54). **Namibe:** “km 60 sur la

route de Moçâmedes à Sá da Bandeira” [-15.00000, 12.66667] (Laurent 1964a:36; Ceriaco et al. 2016a:55); “11 mi NE of Mocamede” [-15.08783, 12.26833] [Bauer and Branch 1995:82; Ceriaco et al. 2016a:55]; “environs de Moçâmedes” [-15.16667, 12.15000] (Laurent 1964a:36; Ceriaco et al. 2016a:55); “35 km south of Moçâmedes” [-15.50000, 12.16667] (Laurent 1964a:36; Ceriaco et al. 2016a:55); “Pico Azevedo” [-15.55000, 12.51667] (Schmidt 1933:5; Loveridge 1947:356; Ceriaco et al. 2016a:55); “Iona National Park” [-16.65669, 12.43672] (Ceriaco et al. 2016a:26); “Espinheira” [-16.78639, 12.35799] (Ceriaco et al. 2016a:26). **Cunene:** “Riv. Mbalé” [-15.16667, 16.75000] (Monard 1931:90); “Forte Roçadas” [-16.71667, 15.01667] (Laurent 1964a:36). **Undetermined Locality:** “Cuanza” (Boulenger 1905:110; Loveridge 1947:356); “Arid subregion” (Frade 1963:253).

Taxonomic and distributional notes: Members of the *Pachydactylus punctatus* complex have been confused with a number of other southern African *Pachydactylus*, including the species *P. geitje* (Sparrman, 1778) and *P. serval* Werner, 1910, South African and Namibian endemics, respectively (Loveridge 1947; Bauer and Branch 1995a). Bocage’s (1867b, 1895a), Boulenger’s (1885, 1905) and Frade’s (1963) Angolan specimens of *P. ocellatus* (= *P. geitje*) and Monard’s (1931, 1937b) *Pachydactylus serval* specimens from “Mbalé,” “Indungu,” and “Kului” have all been redetermined as *P. punctatus* (Loveridge 1947; Bauer et al. 2006b). Bauer and Lamb (2005) and Heinicke et al. (2011, 2017) identified *P. punctatus* as part of the “northwestern clade” of *Pachydactylus*, which comprises numerous morphologically diverse species that are widely distributed in southern Angola and northern Namibia. Laurent (1964a) considered *Pachydactylus amoenoides* Hewitt, 1935 to be distinct from *P. punctatus* based on their sympatry in southern



MAP 142. Distribution of *Pachydactylus punctatus* in Angola.

Angola, and elevated it to a full species. Although occasionally considered a valid species or subspecies of *P. punctatus*, Bauer and Branch (1995a) tentatively included *amoenoides* in the synonymy of *P. punctatus*. Heinz (2011) identified deep, species-level divergences within *P. punctatus sensu lato*, and there are a minimum of four taxa in the complex that occur in Angola. A phylogeographic study of *P. punctatus* is being undertaken (Bauer et al. unpublished).

***Pachydactylus rangei* (Andersson, 1908)**

NAMIB WEB-FOOTED GECKO

Palmatogeko rangei Andersson 1908:299, pl. 1, figs. a–c. Holotype: MWNH 460 (collector P. Range). “Lüderitzbuch in the German South-West Africa,” Karas Region, Namibia.

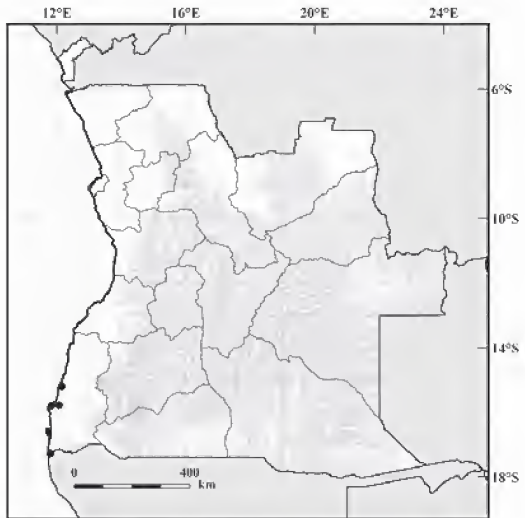
Palmatogeko rangei: Mertens (1937a:6), Haacke (1976b:22–23), Russel and Bauer (1990:198), Branch (1998:263), Bauer (1999:57).

Pachydactylus rangei: Bauer and Lamb (2005:116), Herrman and Branch (2013:98), Bates et al. (2014:140), Ceriaco et al. (2016a:55).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is restricted to the Namib Desert and immediately adjacent areas, from the Holgat River in the Northern Cape, South Africa to extreme south-western Angola.

Occurrences in Angola (Map 143): The species occurs in the Nambi Desert, in south-western Angola. **Namibe:** “Mossamedes” [–15.20000, 12.15000] (Haacke 1976b:22–23; Ceriaco et al. 2016a:55); “Coroca River” [–15.78333, 12.06667] (Haacke 1976b:22–23; Ceriaco et al. 2016a:55); “Porto Alexandre” [–15.80000, 11.83333] (Haacke 1976b:22–23; Ceriaco et al. 2016a:55); “Cunene mouth” [–17.28333, 11.80000] (Haacke 1976b:22–23); “Lacrau” (Haacke 1976b:22–23; Ceriaco et al. 2016a:55); “Namib desert” (Mertens 1937a:6; Hermann and Branch 2013:98; Ceriaco et al. 2016a:55).



MAP 143. Distribution of *Pachydactylus rangei* in Angola.

Taxonomic and distributional notes: This species was initially described as the type species of the genus *Palmatogeko* Andersson, 1908 (Bates et al. 2014). Joger (1985) used immunological data to infer its close affinities with *Pachydactylus* and Bauer and Lamb (2005) synonymized the genus *Palmatogeko* with *Pachydactylus*, within which it is most closely allied to *P. vanzyli* (Steyn and Haacke, 1966) and *P. austeni* Hewitt, 1923 (Heinicke et al. 2017). *Pachydactylus rangei* occupies compacted windward dune faces in the Namib sand seas and other areas of loose sand, including dry river beds, penetrating inland as far as the Namib fog belt (Haacke 1976b; Russell and Bauer 1990; Branch 1998; Bauer 1999; Bates et al. 2014).

***Pachydactylus scherzi* Mertens, 1954**

SCHERZ'S THICK-TOED GECKO

Pachydactylus scherzi Mertens 1954:175, fig. 1. Holotype: SMF 45696 (collectors R. Mertens and E. Scherz). Type locality: “Welwitschia-Fläche der Namib am Südwestrand des Brandberg-Massivs, Damaraland, Südwest-Afrika” [= Welwitschia area of the Namib on the southwestern slope of the Brandberg massif, Damaraland], Namibia.

Pachydactylus scherzi: Bauer and Branch (1995a:69), Bauer and Lamb (2005:116), Heinicke et al. (2011:12), Bauer and Branch (2012:84)

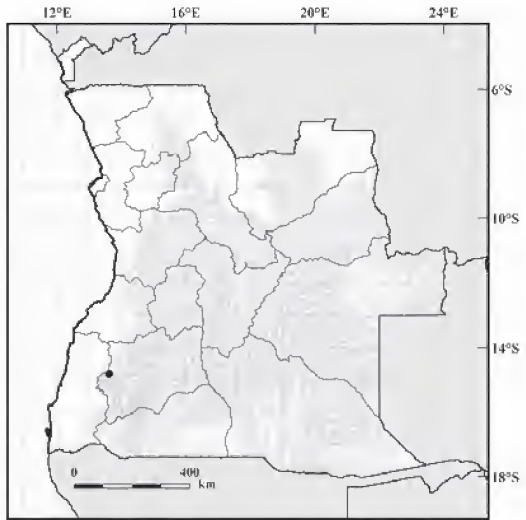
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from western Angola and Namibia, chiefly in association with the Great Western Escarpment.

Occurrences in Angola (Map 144): The species occurs in southwestern Angola. **Huíla:** “10 mi. NE Sa da Bandeira” [-14.81000, 13.61783] (Bauer and Branch 1995a:84).

Taxonomic and distributional notes:

Pachydactylus scherzi is a member of the *P. punctatus* complex of small mostly terrestrial geckos distributed throughout the semi-arid and arid regions of southern Africa (Bauer and Branch 1995a; Heinz 2011), which is, in turn a member of the “northwestern clade” of *Pachydactylus* (Bauer and Lamb 2005; Heinicke et al. 2011, 2017). Although long overlooked (e.g., Branch 1988), *P. scherzi* was treated by Bauer and Branch (1995a) as a full species, with several regional morphs. The single published Angolan record corresponds to Bauer and Branch’s (1995a) northern or “Sanitatas type form.” Heinz (2011) identified deep, species level divergences within *P. punctatus sensu lato*, and found that *P. scherzi* was embedded within this group. A phylogeographic study of the *P. punctatus* complex is being undertaken (Bauer et al., unpublished).



MAP 144. Distribution of *Pachydactylus scherzi* in Angola.

Pachydactylus scutatus Hewitt, 1927

Pachydactylus scutatus Hewitt 1927:395, pl. 23, fig. 2. Holotype: SAM 17471 (collector R.F. Lawrence). Type locality: “Kowaris, S.W.A.” [= Kowares] Kunene Region, Namibia.

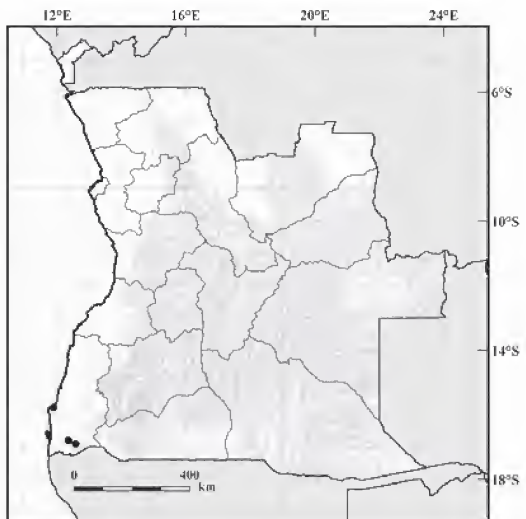
Pachydactylus scutatus: Bauer et al. (1993:37), Branch (1998:260), Bauer (1999:56), Bauer (2010:266), Ceriaco et al. (2016a:25).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from northwestern Namibia and adjacent Angola.

Occurrences in Angola (Map 145): The species occurs in southwestern Angola. **Namibe:** “6 km S Rio Coroca, Iona” [-15.774892, 11.895472] (Bauer 2010:266); “Espinhira” [-16.79772, 12.35422] (Bauer 2010:266; Ceriaco et al. 2016a:25); “Iona, Iona Reserve” [-16.90000, 12.583333] (Bauer 2010:266).

SCALY THICK-TOED GECKO



MAP 145. Distribution of *Pachydactylus scutatus* in Angola.

Taxonomic and distributional notes: Bauer et al. (2002a) re-examined the types of *P. s. angolensis* and revised the *P. scutatus* group, revalidating *P. angolensis* as a full species, although closely allied to *P. scutatus*. Ceriaco et al. (2016a) mistakenly stated that their Espinheira record was the first published for the country.

***Pachydactylus vanzyli* (Steyn and Haacke, 1966)**

NAMIB DESERT GECKO

Kaokogecko vanzyli Steyn and Haacke, 1966:6. Holotype: CR 4000/7 (currently NHMW 1635) (collectors W. Steyn, P.S. Swart, C.G. Coetzee and W.D. Haacke). Type locality: “About 18 miles SW of Orupembe, Kaokoveld, South West Africa,” Kunene Region, Namibia.

Kaokogecko vanzyli: Haacke (1976a:23).

Palmatogecko vanzyli: Branch (1998:264).

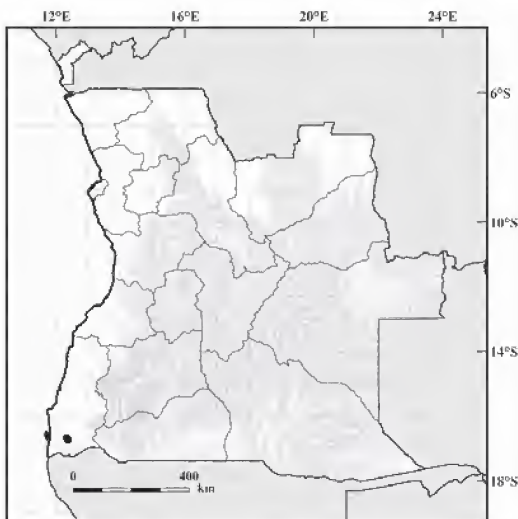
Pachydactylus vanzyli: Bauer and Lamb (2005:116), Ceriaco et al. (2016a:55).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from far northwestern Namibia and adjacent southern Angola.

Occurrences in Angola (Map 146): The species occurs in southern areas of Namibe Province. **Namibe:** “Espinheira” [-16.74477, 12.38186] (Haacke 1976a:25-26; Ceriaco et al. 2016a:55); “Kakolo windmill” [-16.66667, 12.33333] (Haacke 1976a:25-26; Ceriaco et al. 2016a:55).

Taxonomic and distributional notes: This species was first described by Steyn and Haacke (1966) in a new genus, *Kaokogecko*, the affinities of which have long been recognized to be with *Pachydactylus*, and *P. rangei*, in particular (Haacke 1976a, 1976c; Joger 1985; Bauer 1990). Kluge and Nussbaum (1995) synonymized *Kaokogecko* with *Palmatogecko* and Bauer and Lamb (2005) subsequently synonymized the latter genus with *Pachydactylus*. These authors, as well as Heinicke et al. (2011, 2017), confirmed *K. vanzyli*’s sister group relationship to *P. rangei*.



MAP 146. Distribution of *Pachydactylus vanzyli* in Angola.

***Pachydactylus wahlbergii* (Peters, 1869)**

WAHLBERG’S KALAHARI GECKO

Colopus Wahlbergii (Peters 1869:57, pl. fig. 1). Holotype: NHR 385 (collector J. Wahlberg). Type locality: “Damaralande” [= Damaraland], Namibia.

Colopus wahlbergii wahlbergii: Haacke (1976b:30, 1984:173).

Colopus wahlbergii: Branch and Lamb (2005:118).

Pachydactylus wahlbergii: Heinicke et al. (2017:14).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southern Africa from southeastern Angola, through Namibia and Botswana to western Zimbabwe and Limpopo Province, South Africa.

Occurrences in Angola: The species occurs in southeastern Angola in Cuando Cubango Province, close to the Namibian border, although there appear to be no specific published records.

Taxonomic and distributional notes: This species was originally described in the monotypic genus *Colopus* Peters, 1869. Bauer and Lamb (2005) retained *Colopus* as valid despite poor molecular phylogenetic support. Heinicke et al. (2017), however, have conclusively shown that *Colopus wahlbergii* is embedded within *Pachydactylus*. Haacke (1976b) cited *Colopus wahlbergii* from Angola, noting its occurrence in southeastern areas near the Namibian border, but without providing specific localities.

Genus *Rhoptropus* Peters, 1869

Rhoptropus afer Peters, 1869

NAMIB DAY GECKO

Rhoptropus afer Peters 1869:59, pl., figs. 2, 2a–c. Lectotype: ZMB 6149A (collector J. Wahlberg), designated by Loveridge (1947) by implication *fide* Bauer and Günther (1991) and Bauer et al. (1995a:56). Type locality: “Damaralande” [northwestern Namibia].

Rhoptropus afer: Bocage (1870:68, 1873b:212, 1887b:203, 1895a:16, 1897b:210), Boulenger (1885:217, 1910:643), Loveridge (1947:286), Bauer and Good (1996:643), Branch (1998:267), Lamb and Bauer (2001:71), Ceriaco et al. (2016a:55).

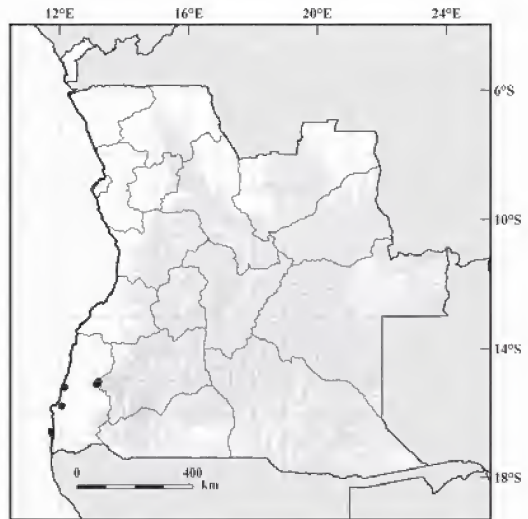
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from northern Namibia and adjacent southern Angola, in the Namib Desert, although absent from the dune seas.

Occurrences in Angola (Map 147): The species is known from southern Namibe Province. **Namibe:** “Maconjo” [-15.01667, 13.20000] (Bocage 1873b:212; Ceriaco et al. 2016a:55); “Capangombe” [-15.10000, 13.15000] (Bocage 1873b:212, 1895a:16, 1897b:210; Ceriaco et al. 2016a:55); “Mossamedes” [-15.20000, 12.15000] (Boulenger 1885:217; Ceriaco et al. 2016a:55); “Rio Coroca” [-15.78333, 12.06667] (Bocage 1887b:203, 1895a:16, 1897b:210; Ceriaco et al. 2016a:55).

Taxonomic and distributional notes:

The genus *Rhoptropus* is a monophyletic group of rupicolous and diurnal geckos endemic to Namibia and southern Angola (Bauer and Good 1996; Lamb and Bauer 2001). A record from Lake Ngami, northern Botswana (as *R. braconnieri* (Thomson, 1878)) has long ago been discredited, with the locality in error and the type specimen (MNHN 294) referable to *R. afer* (see Bauer and Good 1996). Bocage (1873b, 1887b, 1895a) cited the species *Rhoptropus afer* Peters, 1869 from Namibe Province (“Rio Coroca” and “Campagombe”), later he also identified one specimen from “Hanha,” Benguela Province (Bocage 1897b) as *R. afer*. Bocage (1897b) considered that the specimen captured in “Hanha” proved that the species probably extended further north, however the distribution of this species is limited to the Namib Desert only (Bauer and Good 1996; Branch 1998). Loveridge (1947) omitted the records from Boulenger (1885, 1910) for “Mossamedes” and “Angola,” respectively.



MAP 147. Distribution of *Rhoptropus afer* in Angola.

Rhoptropus barnardi* Hewitt, 1926*BARNARD'S NAMIB DAY GECKO**

Rhoptropus barnardi Hewitt 1926a:413, pl. 35, figs. 1–3. Syntypes: SAM 16639 (6 specimens) (K.H. Barnard and R.F. Lawrence). Type locality: “near Eriksson’s Drift, Kunene River,” Cunene Province, Angola.

Rhoptropus barnardi: Laurent (1964a:35), Branch (1998:267), Ceriaco et al. (2016a:26, 55).

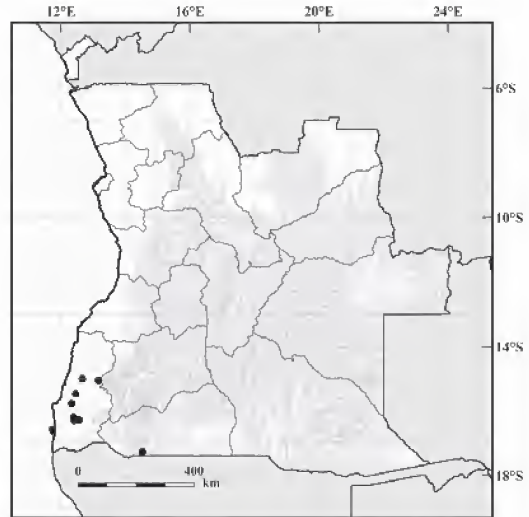
Global conservation status (IUCN): Not Evaluated.

Global distribution: Occurs mainly inland of the northern Namib Desert, from central Namibia to Southern Angola, reaching its eastern limit in the Otavi Highlands of northern Namibia.

Occurrences in Angola (Map 148): The species is known from Namibe and Cunene provinces in southwestern Angola. **Cunene:** “near Eriksson’s Drift, Kunene River” [-17.26944, 14.525] (Hewitt 1926a:41).

Namibe: “km 60 de la route de Moçâmedes à Sá da Bandeira” [-15.00000, 12.66667] (Laurent 1964a:35; Ceriaco et al. 2016a:55); “Approximately 7.35 km north-west (by road) of Pico Azevedo” [-15.47519, 12.46319] (Ceriaco et al. 2016a:26); “Omauha Lodge” [-16.20033, 12.40003] (Ceriaco et al. 2016a:26); “Iona National Park, Rio Curoca crossing, North side of the river” [-16.30189, 12.42028] (Ceriaco et al. 2016a:26); “Iona National Park, Rio Curoca crossing, south side of the river” [-16.30408, 12.41667] (Ceriaco et al. 2016a:26); “Iona National Park, Rio Curoca in the Pediva Hot Springs area” [-16.28359, 12.56106] (Ceriaco et al. 2016a:26); “Namibe-Lubango road, 2 km east (by road) of Mangueiras, south side of the road” [-15.04467, 13.15906] (Ceriaco et al. 2016a:27); “Iona National Park” [-15.77317, 12.33303] (Ceriaco et al. 2016a:27).

Taxonomic and distributional notes: Schmidt (1933) reported some specimens identified as *Rhoptropus barnardi* Hewitt, 1926 but, absent appropriate comparative material, he was unaware that his specimens represented a new taxon (Bauer and Good 1996), *Rhoptropus taeniostictus* Laurent, 1964. *Rhoptrops bradfieldi* is broadly distributed in a variety of mainly rocky habitats from below the Escarpment and on the “Huila Plateau” (Haacke and Odendaal 1981). However, the range in Angola is poorly known, so if populations are continuous or fragmented is uncertain. Specific records from Huila have not been published but are relatively numerous. A record from “Novo Redondo” [= Sumbe] (Bauer and Good 1996) is in error, as there is no mention of this locality in the work which these authors cite (Haacke and Odendaal 1981). The discovery of a species that is superficially similar to *R. barnardi* (see *Rhoptropus* sp. below) necessitates the reexamination of specimens, especially those occurring north of Mossamedes (Namibe City) in order to determine the true distribution of both taxa.



MAP 148. Distribution of *Rhoptropus barnardi* in Angola.

Rhoptropus benguellensis* Mertens, 1938*BENGUELA NAMIB DAY GECKO (Endemic)**

Rhoptropus boultoni benguellensis Mertens 1938a:431, figs. 4–5. Holotype: SMF 25275 (collector W. Schack). Type locality: “Cubal, 900m H., Prov. Benguela, Angola.”

Rhoptropus afer: Bocage (1897b:210).

Rhoptropus ? *boultoni*: Parker (1936:127).

Rhoptropus afer benguellensis: Mertens (1938a: 430, 431).

Rhoptropus boultoni benguellensis: Mertens (1967:59), Hellmich (1957a:37), Laurent (1964a:33), Bauer and Good (1996:643), Heinicke et al. (2017:6).

Global conservation status (IUCN): Not Evaluated.

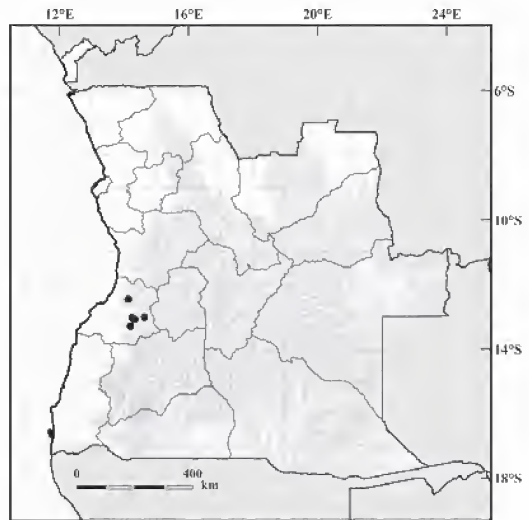
Global distribution: Endemic to western Angola.

Ocurrences in Angola (Map 149): The species is endemic to the southwest quadrant of Angola, north of the Namib. **Benguela:** “Bocoio” [-12.46667, 14.13333] (Parker 1936:127); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:431; Laurent 1964a:33; Mertens 1967:59; Bauer and Good 1996:643); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957b:37; Laurent 1964a:33); “Marco de Canavezes (Cubal de Ganda)” [-13.08333, 14.33333] (Laurent 1964a:33); “Hanha” [-13.30000, 14.20000] (Bocage 1897b:210).

Taxonomic and distributional notes:

Three subspecies of *Rhoptropus boultoni*, including *R. b. benguellensis*, were long recognized (Bauer and Good 1996; Bauer and Lamb 2001), but recent molecular phylogenetic research has revealed that all three are specifically distinct (Kuhn 2016; Heinicke et al. 2017)

and do not form a monophyletic group. Loveridge (1947) and Laurent (1964) regarded a number of earlier references to other *Rhoptropus* to be applicable to this taxon, and we here have followed them. Although formally published localities are from Benguela, recent collections have included material from as far north as the Cuanza River in central Angola (Kuhn 2016). This species occupies some of the most mesic environments of any member of the genus. In the original description of Mertens (1938), the two images of the type specimen were mistakenly labeled as *Rhoptropus afer benguellensis*.



MAP 149. Distribution of *Rhoptropus benguellensis* in Angola.

Rhoptropus biporosus FitzSimons, 1957

FITZSIMONS' NAMIB DAY GECKO

Rhoptropus biporosus FitzSimons 1957:395. Holotype: TM 24198 (collector Bernard Carp/Transvaal Museum Expedition). Type locality: “Orupembe, 120 miles west of Ohopoho [= Opuwo], Kaokoveld, Southwest Africa,” Kunene Region, Namibia.

Rhoptropus biporosus: Bauer and Good (1996:643), Branch (1998:267), Ceriaco et al. (2016a:27, 55).

Global conservation status (IUCN): Not Evaluated.

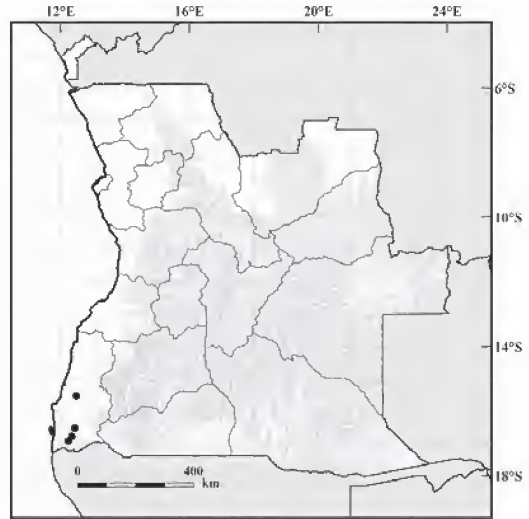
Global distribution: Recorded only from inland of the northern Namib dune fields form extreme northern Namibia and into adjacent Angola.

Ocurrences in Angola (Map 150): The species is present in southern Namibe Province below the Escarpment. **Namibe:** “Pico Azevedo” [-15.53400, 12.49197] (Bauer and Good 1996:643; Ceriaco et al. 2016a:55); “Iona National Park” [-16.53347, 12.44560] (Ceriaco et al. 2016a:27); “Iona National Park, 20 km south-south-west (by air) of Espinheira” [-16.93169, 12.24500]

(Ceríaco et al. 2016a:27); “Espinheira” [-16.78886, 12.35761] (Ceríaco et al. 2016a:28).

Taxonomic and distributional notes:

Rhoptropus biporosus is closely allied to *R. barnardi* and one or more undescribed species of small-bodied congeners that occupy similar habitats in arid to semi-arid rocky areas bordering the Namib (Kuhn 2016).



MAP 150. Distribution of *Rhoptropus biporosus* in Angola.

***Rhoptropus boultoni* Schmidt, 1933**

BOULTON'S NAMIB DAY GECKO

Rhoptropus boultoni Schmidt 1933:7, fig. 2, pl. 1 (far right). Holotype: CM 5634 (collectors R. and L. Boulton). Type locality: “Pico Azevedo,” Namibe Province, Angola.

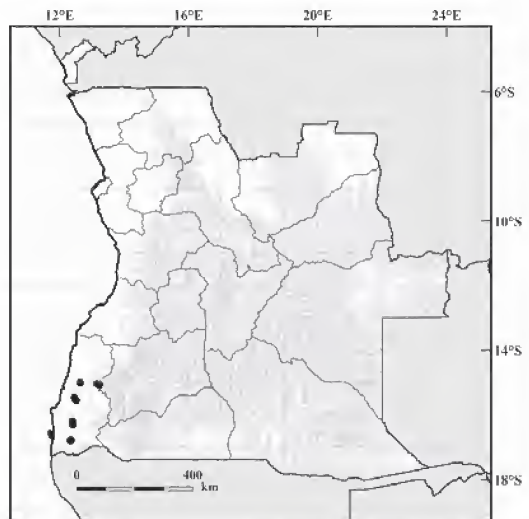
Rhoptropus boultoni: Barbour and Loveridge (1946:187); Marx (1959:469); McCoy and Richmond (1966:155); Bauer and Good (1996:643).

Rhoptropus boultoni boultoni: Ceríaco et al. (2016a:28, 55).

Global conservation status (IUCN): Not Evaluated.

Global distribution: Occurs mainly inland of the northern Namib Desert, from central Namibia to southwestern Angola.

Occurrences in Angola (Map 151): The species is known from southwestern Angola, inland of the Namib and as far north as the desert's northern limit in southern Namibe. **Namibe:** “Pico Azevedo” [-15.55000, 12.51667] (Schmidt 1933:7; Barbour and Loveridge 1946:181; Marx 1959:469; McCoy and Richmond 1966:155; Ceríaco et al. 2016a:55); “Iona National Park, 3.4 km southwest (by air) of Espinheira, vicinity of “Lion Cave” [-16.80375, 12.33978] (Ceríaco et al. 2016a:28); “Approximately 7.35 km northwest (by road) of Pico Azevedo” [-15.47589, 12.46269] (Ceríaco et al. 2016a:28); “Espinheira” [-16.79150, 12.35168] (Ceríaco et al. 2016b:28); “Omauha Lodge” [-16.19792, 12.39981] (Ceríaco et al. 2016a:28); “Iona National Park, Rio Curoca crossing, south side of river” [-16.30408, 12.41667] (Ceríaco et al.



MAP 151. Distribution of *Rhoptropus boultoni* in Angola.

2016a:29); “Leba Pass, between river and highway” [-15.07033, 13.24381] (Ceríaco et al. 2016a:29); “Namibe-Lubango road, 2.0 km east (by road) of Mangueiras, south side of the road” [-15.04467, 13.15906] (Ceríaco et al. 2016a:29); “Namibe-Lubango road, road marker 59, 1.8 km west by road of Caraculo” [-15.01531, 12.64244] (Ceríaco et al. 2016a:29); “Pico Azevedo” [-15.53400, 12.49197] (Ceríaco et al. 2016a:29); “Espinheira” [-16.78894, 12.35775] (Ceríaco et al. 2016a:29).

Taxonomic and distributional notes: Three subspecies of *Rhoptropus boultoni* have been recognized (Bauer and Good 1996; Bauer and Lamb 2001), but recent molecular phylogenetic research has revealed that all three are specifically distinct (Kuhn 2016; Heinicke et al. 2017) and do not form a monophyletic group. *Rhoptropus boultoni* generally occupies areas of large boulders or occurs in association with large trees, such as baobab, *Adansonia digitata* (Bauer and Good 1996). There is deep genetic substructure in *R. boultoni sensu stricto* (Kuhn 2016) and further investigation may reveal that the taxon as now construed constitutes a species complex of similar, large-bodied *Rhoptropus*.

Rhoptropus montanus Laurent, 1964

MOUNTAIN NAMIB DAY GECKO (Endemic)

Rhoptropus boultoni montanus Laurent 1964a:31. Holotype: MD 1854 (collector A. Barros Machado). Type locality: “Boca da Humpata, region de Sá da Bandeira” [Boca da Humpata, Lubango], Huíla Province, Angola.

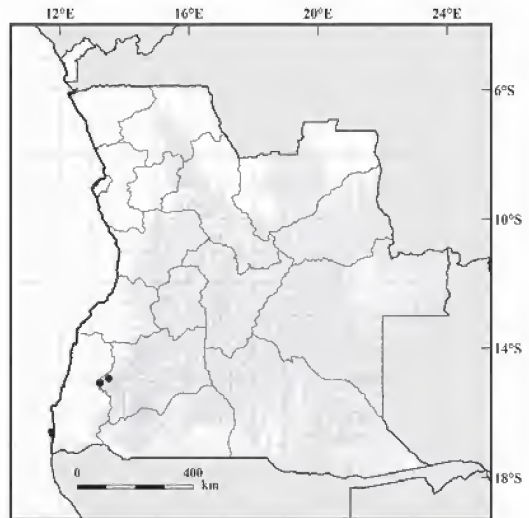
Rhoptropus boultoni montanus: Bauer and Good (1996:644); Ceríaco et al. (2016a:29), Heinicke et al. (2017:6).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is Endemic to southwestern Angola.

Occurrences in Angola (Map 152): All known localities are on top of the Great escarpment. **Huíla:** “Boca de Humpata, Sá da Bandeira” [-14.93333, 13.51667] (Laurent 1964a:31; Bauer and Good 1996:644). **Namibe:** “Leba Pass overlook” [-15.07700, 13.23292] (Ceríaco et al. 2016b:29); “Leba Pass, between river and highway” [-15.07033, 13.24369] (Ceríaco et al. 2016a:29).

Taxonomic and distributional notes: Three subspecies of *Rhoptropus boultoni*, including *R. b. montanus*, were long recognized (Bauer and Good 1996; Bauer and Lamb 2001), but recent molecular phylogenetic research has revealed that all three are specifically distinct (Kuhn 2016; Heinicke et al. 2017) and do not form a monophyletic group. Additional localities from recent collections (Ceríaco et al. 2016a) reinforce that this is a high elevation species, occurring in cooler, more mesic environments than most of its congeners. We recently examined the holotype of this taxon, which is in poor condition, having gone completely black and brittle after more than 60 years in formalin.



MAP 152. Distribution of *Rhoptropus montanus* in Angola.

Rhoptropus taeniosictus* Laurent, 1964*ANGOLAN NAMIB DAY GECKO (Endemic)**

Rhoptropus taeniosictus Laurent 1964a:33, figs. 5a–b. Holotype: MD 1967 (collector A. Barros Machado). Type locality: “km 60 de la route de Moçâmedes à Sá da Bandeira” [= km 60 road from Namibe to Lubango], Angola.

Rhoptropus barnardi: Schmidt (1933:6).

Rhoptropus taeniosictus: Bauer and Good (1996:644), Ceriaco et al. (2016a:30, 56), Heinicke et al. (2017:6).

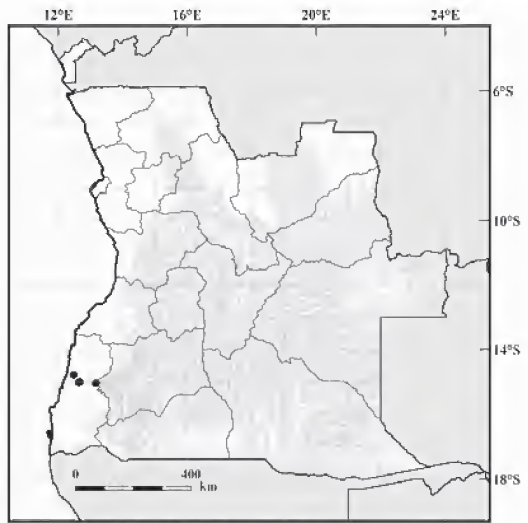
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is endemic to southwestern Angola.

Occurrences in Angola (Map 153): All published records are from Namibe Province north of the Namib proper and below the Escarpment. **Namibe:** “Mucungu” [-14.78333, 12.48333] (Schmidt 1933:6; Ceriaco et al. 2016a:56); “60 km of the road of Moçâmedes to Sá da Bandeira” [-15.00000, 12.66667] (Laurent 1964a:33; Ceriaco et al. 2016a:56); “Namibe-Lubango road, 2 km east (by road) of Mangueiras, south side of the road” [-15.04467, 13.15906] (Ceriaco et al. 2016a:30); “Namibe-Lubango road, road marker 59, 1.8 km west (by road) of Caraculo, on the north side of the road” [-15.01611, 12.64369] (Ceriaco et al. 2016a:30).

Taxonomic and distributional notes:

Laurent (1964a) in the original description noted in some similarities between the new species *R. barnardi* Hewitt, 1926 and *R. Boultoni* Schmidt, 1933, although it is apparent that he regarded its closest affinities with *R. barnardi*. Kuhn (2016) found its phylogenetic position to be equivocal, with nuclear genes suggesting affinities with *R. montanus*, Laurent, 1964 and mitochondrial data placing it as the sister to *R. barnardi* + *R. biporosus* + *R. benguellensis*.



MAP 153. Distribution of *Rhoptropus taeniosictus* in Angola.

Rhoptropus* sp.*(Endemic)**

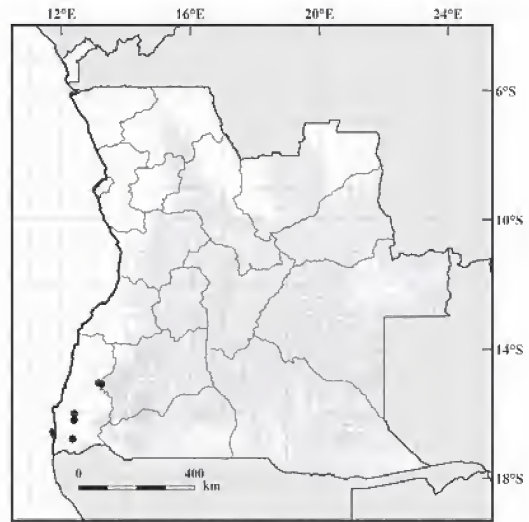
Rhoptropus sp.: Ceriaco et al. (2016a:31).

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 154): The species is known from southwestern Angola. **Namibe:** “Espinheira” [-16.79242, 12.35400] (Ceriaco et al. 2016a:30); “Omauha Lodge” [-16.20033, 12.40003] (Ceriaco et al. 2016a:30); “Tona National Park, north of Tambor” [-15.99636, 12.40667] (Ceriaco et al. 2016a:30); “Leba Pass, between river and highway” [-15.07003, 13.24347] (Ceriaco et al. 2016a:30); “Namibe-Lubango road, 2 m east (by road) of Mangueiras, south side of the road” [-15.04467, 13.15906] (Ceriaco et al. 2016a:30).

Taxonomic and distributional notes: This as yet undescribed taxon is superficially most similar to *R. barnardi*, but is most closely related to *R. biporosus* (Kuhn 2016). It has a significant elevational range, extending from near the coast to the Escarpment and appears to be parapatrically distributed relative to *R. biporosus*. Recognition that there is a cryptic species in Angola

suggests that northern specimens of *R. barnardi* should be reexamined to confirm their specific identity.



MAP 154. Distribution of *Rhoptropus* sp. in Angola.

Family Amphisbaenidae Gray, 1825

Genus *Dalophia* Gray, 1865 [see *Monopeltis welwitschii* account for comments]

Dalophia angolensis Gans, 1976

ANGOLAN WORM LIZARD

Dalophia angolensis Gans 1976:6, fig. 4. Holotype: IICT 167-1959 [= CZL 167] (collector F. Frade). Type locality: “Calombe, 7 km “west” of Vila Luso - Moxico Road” [= Calombe, 7 km west of Luena], Moxico Province, Angola.

Monopeltis ellenbergeri: Monard (1931:97, 1937b:67).

Monopeltis granti trnasvaalensis: Monard (1937b:67).

Dalophia pistillum: Loveridge (1941c:436).

Dalophia ellenbergeri: Loveridge (1941c:433), Broadley (1997a:34), Gans (2005:30).

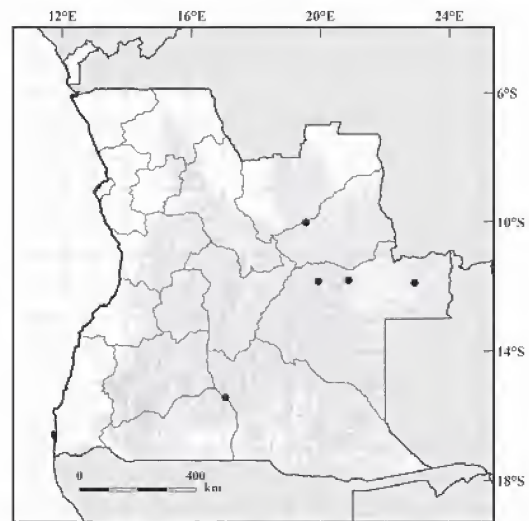
Tomorpeltis colobura luluae: Laurent (1964a:87).

Dalophia angolensis: Broadley et al. (1976:446), Gans (2005:30).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southeastern Angola and adjacent western Zambia.

Ocurrences in Angola (Map 155): The species is known from the type locality and near areas, limited to eastern Angola. **Lunda Sul:** “Alto Cuilo” [-10.01667, 19.55000] (Laurent 1964a:87, Gans 1976:10; Broadley et al. 1976:446). **Moxico:** “Lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:87; Gans 1976:10; Broadley et al. 1976:446); “Calombe, 7 km west of Vila Luso - Moxico road” [-11.83333, 19.93333] (Gans 1976:6;



MAP 155. Distribution of *Dalophia angolensis* in Angola.

Broadley et al. 1976:446); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:87; Gans 1976:10; Broadley et al. 1976:446). **Cuando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1937b:67; Loveridge 1941c:436; Broadley 1997a:34); “vient du Haut-Zambèze, c’est-à-dire d’une région géographique assez proche du Kubango” (Monard 1931:97).

Taxonomic and distributional notes: According to Gans (2005) this species is known only from the type series, which is in conflict with Gans (1976) and Broadley et al. (1976), and is unsupported by any discussion or data. The interpretation of Gans (2005) would mean that this species is an Angolan endemic, however, in the absence of contradictory evidence we accept the earlier data (Gans 1976) that support at least one occurrence in adjacent northwestern Zambia.

Dalophia ellenbergeri (Angel, 1920)

ELLENBERGER’S WORM LIZARD

Monopeltis Ellenbergeri Angel 1920:615, figs. 1–2. Syntypes: MNHN 20.78-20.80 (collector M. Ellenberger). Type locality: “Lealui (Haut-Zambèze),” Zambia.

Dalophia ellenbergeri: Loveridge (1941c:433), Broadley (1997a:34), Gans (2005:30).

Dalophia pistillum: Branch and McCartney (1992:2).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Zambia and Angola.

Occurrences in Angola (Map 156): A single published locality from southeastern Angola, near the Zambia border. **Cuando Cubango:** “approximately 50 km E of Cuito Cuanavale” [-15.23333, 19.61667] (Branch and McCartney 1992:2; Broadley 1997a:34).

Taxonomic and distributional notes: Branch and McCartney (1992) collected one specimen near “Cuito Cuanavale” identified as *Dalophia pistillum* (Boettger, 1985) which, in accordance with Broadley (1997a) should represent the first record of *Dalophia ellenbergeri* from Angola. Earlier Angolan records attributed to this species (e.g., Monard 1931; Loveridge 1941c) are referable to *Dalophia angolensis* Gans, 1976.



MAP 156. Distribution of *Dalophia ellenbergeri* in Angola.

Dalophia pistillum (Boettger, 1895)

BLUNT-TAILED WORM LIZARD

Monopeltis pistillum Boettger 1895:62. Syntypes: SMF 11833 (3 specimens), formerly 5455 2a (collector not stated). Type locality: “Sambesi, Ostafrika” [= Zambezi], Zambia.

Monopeltis granti kuanyamarum Monard 1937b:67. Holotype: MHNC 91.0623 (collector A. Monard). Type locality: “Mupanda,” Cunene Province, Angola.

Monopeltis granti transvaalensis: Monard (1937b:67).

Dalophia pistillum: Loveridge (1941c:435); Broadley et al. (1976:467), Haacke (1984:172), Gans (2005).

Global conservation status (IUCN): Not Evaluated.

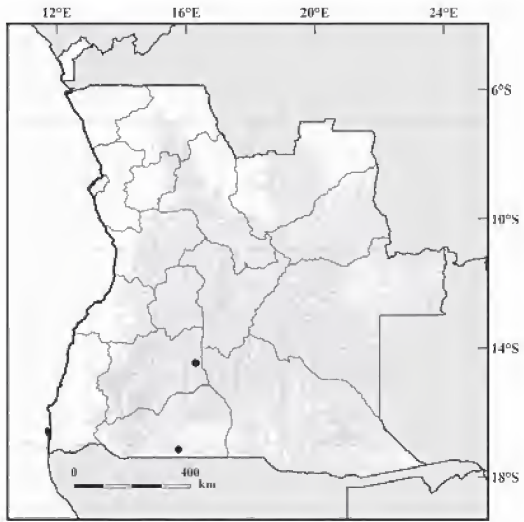
Global distribution: This species has the widest range in the genus, ranging from Angola through Zambia to Mozambique and south to Botswana, Namibia, and the Northern Cape Province of South Africa.

Occurrences in Angola (Map 157): Known from the southern Angola. **Huíla:** “Kuvangu”

[-14.46667, 16.30000] (Monard 1937b:68, Loveridge 1941c:436); **Cunene**: “Mupanda” [-17.13333, 15.76667] (Monard 1937b:67; Loveridge 1941c:436; Broadley et al. 1976:467).

Taxonomic and distributional notes:

Loveridge (1941c) considered the forms *D. granti* (Boulenger 1907), *D. colobura* (Boulenger 1910), *D. transvaalensis* (FitzSimons 1933), *D. mossambica* (Cott, 1934) and *D. kaynuamarum* (Monard, 1937) all synonyms of *D. pistillum*. Laurent (1964a) suggested that these constituted three species (*D. pistillum*, *D. mossambicus*, *D. colobura*) with *granti*, *transvaalensis* and *kaynuamarum* potentially synonyms or valid races of the first of these. Haacke (1984) provided a map with some points in Angola, one of which matches “Mupanda”, unlike the others from Cuando Cubango Province, which probably correspond to *Dalophia angolensis* (Gans, 1976) or possibly even *Dalophia ellenbergeri* Angel, 1920.



MAP 157. Distribution of *Dalophia pistillum* in Angola.

Genus *Monopeltis* Smith, 1848

***Monopeltis anchietae* (Bocage, 1873)**

ANCHIETA'S WORM LIZARD

Lepidosternon (*Phractogonus*) *Anchietae* Bocage 1873a:247, figs. 1–4. Holotype: MBL T46.525 (collector J.A. d'Anchieta) destroyed by fire 18 March 1978. Type locality: “Humbe, dans l'intérieur de Mossamedes, près des bords de la rivière Cunene” [= Humbe, near Cunene River], Cunene Province, Angola.

Monopeltis okavangensis Monard 1931:95, fig. 5. Syntypes: MHNC 91.0614–15, NMBA 13331 (collector A. Monard). Type locality: “Vila da Ponte” and “Kakindo” [= Cuvango and Caquindo], Huíla and Cuando Cubango provinces, Angola.

Monopeltis devisi (Monard 1937b:69). Holotype: MHNC 91.0620 (collector A. Monard). Type locality: “Mupa,” Cunene Province, Angola.

Monopeltis Anchietae: Bocage (1895a:28, 1897a:194).

Monopeltis anchietae: Loveridge (1941c:410), Frade (1963:252), Gans (1967:84, 1976:1, 2005:35), Broadley et al. (1976:377), Broadley (1997b:8), Branch (1998:124), Broadley and Measey (2010).

Monopeltis okavangensis: Monard (1937b:68).

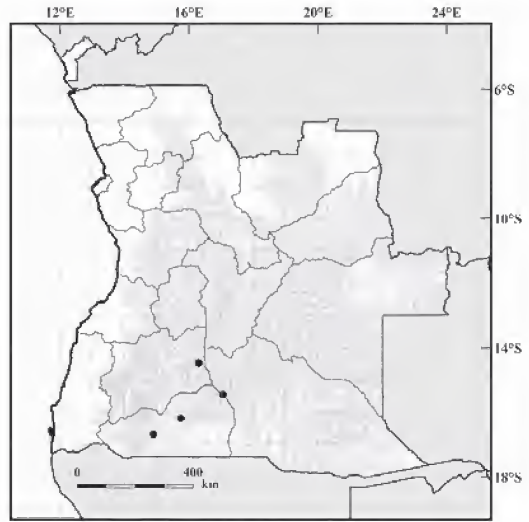
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Angola, Namibia (Caprivi Strip and Damaraland) and Botswana.

Occurrences in Angola (Map 158): The species occurs in the southern Angola, exclusive of the arid southwest. **Huíla**: “Kuvangu (= Vila da Ponte)” [-14.46667, 16.30000] (Monard 1931:95, 1937b:69; Loveridge 1941c:410, 412; Gans 1967:84, 2005:35, Broadley et al. 1976:377, 381). **Cunene**: “Mupa” [-16.18333, 15.75000] (Monard 1937b:69; Loveridge 1941c:410, 412; Gans 1967:84, 2005:35; Broadley et al. 1976:377, 381); “Humbe” [-16.68333, 14.90000] (Bocage 1873a:247, 1895a:28, 1897a:194; Loveridge 1941c:410; Gans 1967:84, 2005:35; Broadley et al. 1976:377, 381; Broadley 1997b:8). **Quando Cubango**: “Kakindo (= Caquindo)” [-15.45000, 17.05000] (Monard 1931:95, 1937b:68; Loveridge 1941c:410, 412; Broadley et al. 1976:377, 381; Gans 2005:35).

Taxonomic and distributional notes:

MHNC specimens of the nominal taxa described by Monard (1931, 1937), were originally without a formal catalogue numbering system and were listed as “LCFM (unnumbered) by Gans (2005)” and earlier workers. The synonyms *Monopeltis okavangensis* Monard, 1931 and *Monopeltis devisi* Monard, 1937 are based on the most northerly records for the species (Loveridge 1941c, Broadley et al. 1976; Gans 2005). *Monopeltis anchietae* is sympatric with *M. capensis* Smith, 1848 at some localities in the western part of its range (Broadley et al. 1976), and also with *M. infusata* Broadley, 1997 at “Humbe” in Cunene Province (Broadley 1997b).



MAP 158. Distribution of *Monopeltis anchietae* in Angola.

Monopeltis infusata* Broadley, 1997*INFUSCATE WEDGE-SNOURED WORM LIZARD**

Monopeltis infusata Broadley 1997b:6. Holotype: NMZB 6072 (collector W. Howells). Type locality: “Nottingham Estates, Beitbridge District, Zimbabwe.”

Monopeltis capensis: Bocage (1873b:216, 1895a:28), Loveridge (1941c:425), Gans (1967:85).

Monopeltis capensis capensis: Loveridge (1941c:425).

Monopeltis sphenorhynchus: Gans (1997:47).

Monopeltis capensis capensis (var. B): Broadley et al. (1976:388).

Monopeltis infusata: Branch (1998:126), Gans (2005:36).

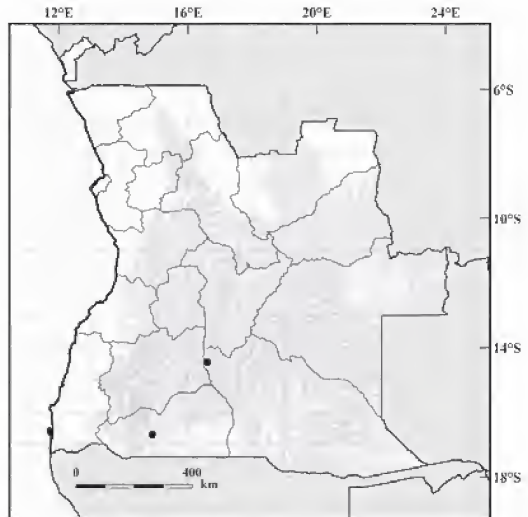
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southwestern Angola, south through Namibia to Northern Cape, southwestern to Botswana.

Occurrences in Angola (Map 159): The species occurs in southern Angola adjacent to the Namibian border, exclusive of the arid southwest. **Cunene:** “Humbe” [-16.68333, 14.90000] (Bocage 1873b:216, 1895a:28; Loveridge 1941c:425; Gans 1967:86; Broadley et al. 1976:388; Broadley 1997b:8). **Cuando Cubango:** “Tumbo (= Tumbale River)” [-14.45462, 16.59369] (Broadley et al. 1976:388; Broadley 1997b:8). **Undetermined Locality:** “Sturuba” (Broadley et al. 1976:388; Broadley 1997b:8).

Taxonomic and distributional notes:

Broadley et al. (1976) identified three allopatric forms of *Monopeltis capensis capensis* (A. Smith, 1848) that differed mainly in



MAP 159. Distribution of *Monopeltis infusata* in Angola.

some differences and transferred the Angolan records to Group B (= var. B). Later, Broadley (1997b) described *Monopeltis infuscata* Broadley, 1997 allocating these specimens to the new taxon (Gans 2005). *Monopeltis infuscata* is sympatric with *Monopeltis anchietae* Bocage, 1973 at “Humbe,” Cunene Province (Broadley 1997b).

Monopeltis luandae Gans, 1976

LUANDA WORM LIZARD (Endemic)

Monopeltis luandae Gans 1976:3, fig. 2. Holotype: AMNH 111338 (collector J.A. Quartau). Type locality: “on the ground in Luanda on the road toward the mouth of the Quanza River, Angola.”

Monopeltis luandae: Broadley et al. (1976:437), Gans (2005:36).

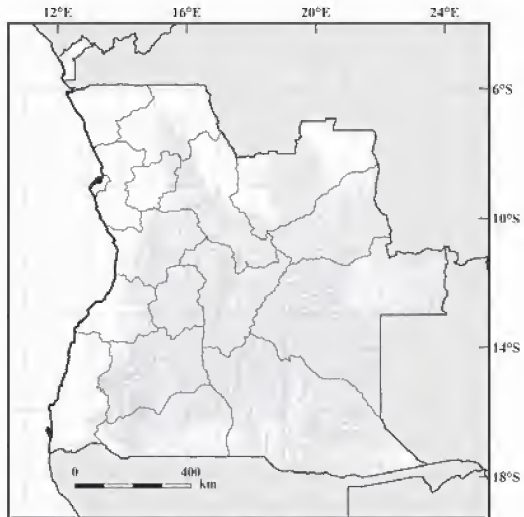
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Ocurrences in Angola (Map 160): The species is known from the type locality “Luanda.” **Luanda:** “on the ground in Luanda on the road toward the mouth of the Quanza River” (Gans 1976:3, 2005:36; Broadley et al. 1976:437, 440); “Luanda” [-8.83333, 13.26667] (Gans 1976:3, 2005:36; Broadley et al. 1976:437, 440); “Airport, Luanda” [-8.83333, 13.26667] (Gans 1976:3, 2005:36; Broadley et al. 1976:437, 440).

Taxonomic and distributional notes:

This species is only known from the type series.



MAP 160. Distribution of *Monopeltis luandae* in Angola.

Monopeltis perplexus Gans, 1976

WEDGE-SNOURED WORM LIZARD (Endemic)

Monopeltis perplexus Gans 1976:6, fig. 3. Holotype: AMNH 47732 (collector Vernay-Angola Expedition). Type locality: “Hanha or Capelongo,” Angola.

Monopeltis perplexus: Broadley et al. (1976:413), Gans (2005:37).

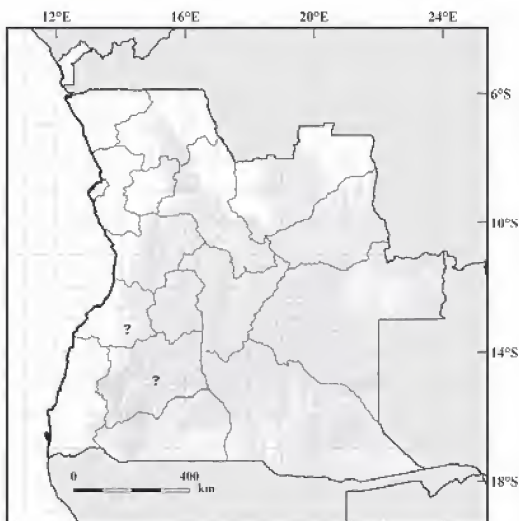
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southwestern Angola.

Ocurrences in Angola (Map 161): The type locality is one of the two sites “Hanha” or “Cape-longo.” **Benguela:** “Hanha” [-13.30000, 14.20000] (Gans 1976:6, 2005:37; Broadley et al. 1976:413, 416). **Huíla:** “Capelongo” [-14.88333, 15.08333] (Gans 1976:6, 2005:37; Broadley et al. 1976:413, 416).

Taxonomic and distributional notes:

Monopeltis perplexus is only known from the type locality, which is one of two disparate sites (Broadley et al. 1976c; Gans 2005). This species is allopatric from all other forms, differing from *Monopeltis capensis* Smith, 1848 and *Monopeltis anchietae* (Bocage, 1873) (Broadley et al. 1976).



MAP 161. Distribution of *Monopeltis perplexus* in Angola.

***Monopeltis vanderysti* de Witte, 1922**

VANDERYST'S WORM LIZARD

Monopeltis Vanderysti de Witte 1922:66, pl. 1, figs. 1, 1a–c. Lectotype: MRAC 1872 (collector R.P. Vanderyst) designated by Gans (1967). Type locality: “Wombali, Leverville (dist. du Kwango); Lac Leopold II; Kasai” [Democratic Republic of Congo], restricted to “Wombali (dist. Lac Leopold II), Zaire” by Gans (1967:86–87).

Monopeltis vanderysti vilhenai Laurent 1954a:66, figs. 16–18. Holotype: MRAC 17503 (formerly MD 5040) (collector A. Barros Machado). Type locality: “Région de Dundo” [= Dundo], Lunda Norte Province, Angola.

Monopeltis vanderysti vilhenai: Laurent (1964a:84), (Gans 1867:87).

Monopeltis vanderysti: Broadley et al. (1976:431), Gans (2005:38).

Global conservation status (IUCN): Not Evaluated.

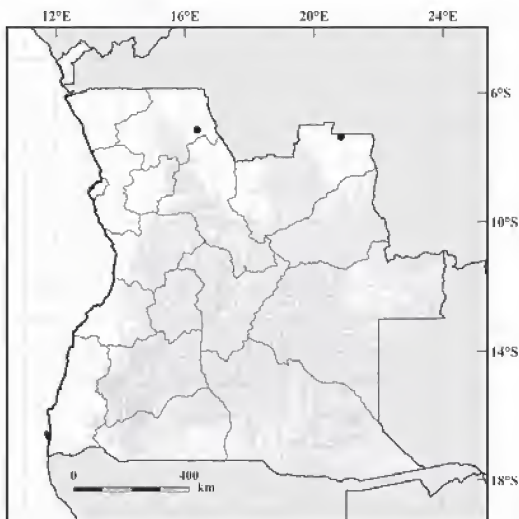
Global distribution: The species is known from south-central Democratic Republic of Congo into adjacent Angola.

Ocurrences in Angola (Map 162): The species is known from the far north of Angola.

Lunda Norte: “Dundo” [–7.36667, 20.83333] (Laurent 1954a:66, 1964a:84; Gans 1967:87; Broadley et al. 1976:437; Gans 2005:38).

Uíge: “Sanza Pombo” [–7.14833, 16.37422] (Broadley et al. 1976:436; Gans 2005:38).

Taxonomic and distributional notes: According to Broadley et al. (1976) the description of *Monopeltis vanderysti vilhenai* by Laurent (1954a) contains various errors, and the purported diagnostic characters do not differentiate it from the nominotypical form (Gans 2005).



MAP 162. Distribution of *Monopeltis vanderysti* in Angola.

Monopeltis welwitschii* (Gray, 1865)*WELWITSCH'S WORM LIZARD (Endemic)**

Dalophia Welwitschii Gray 1865a:455, figs. 7–8. Syntypes: BMNH 1946.8.20.89–90 (formerly BMNH 64.7.13.34–35) (collector F. Welwitsch). Type locality: “Angola; Pungo-Andongo,” Malanje Province, Angola.

Monopeltis Welwitschii: Gray (1865b:377), Bocage (1895a:29, 1897a:194).

Monopeltis welwitschii: Loveridge (1941c:431), Frade (1963:252), Gans (1967:87, 2005:38).

Dalophia Welwitschii: Broadley et al. (1976:376).

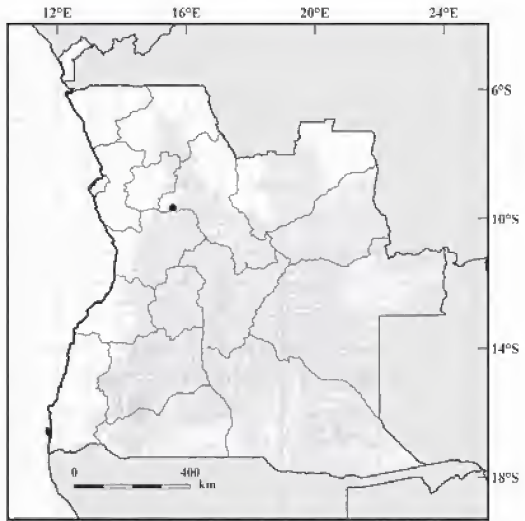
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known only from Angola.

Ocurrences in Angola (Map 163): The species is only known from the type locality “Pungo-Andongo” but may extend to the south of the type locality and to other provinces (e.g., Kwanza Sul; Bié). **Malanje:** “Pungo-Andongo” [−9.66667, 15.58333] (Gray 1865a:455, 1865b:377; Bocage 1895a:29, 1897a:194; Loveridge 1941c:432; Gans 1967:87, 2005:38; Broadley et al. 1976:376).

Taxonomic and distributional notes:

This species description (Gray, 1865a) published in the “Proceedings of the Zoological Society of London” was reprinted (Gray 1865b) in “Annals and Magazine of Natural History” under the heading Proceedings of Learned Societies, creating some subsequent confusion as to the correct citation of the paper. Broadley et al. (1976) noted that *Dalophia welwitschii* Gray, 1865 was the



MAP 163. Distribution of *Monopeltis welwitschii* in Angola.

species of the *Dalophia* group closest to *Monopeltis*. In fact, *Dalophia welwitschii* Gray, 1865 is the type species of the genus *Dalophia*, yet despite this Gans (2005) both recognized *Dalophia* as valid and listed this taxon under *Monopeltis*. This paradox appears to have been an oversight on the part of Gans (2005). Resolution through phylogenetic analysis has been hampered by the fact that *M. welwitschii* is known only from the type specimens. Should it actually belong in *Monopeltis*, the next available generic name for remaining *Dalophia* would be *Tomuropeltis* Laurent, 1947 (type species *Monopeltis giganteus* Peracca, 1903).

Genus *Zygaspis* Cope, 1885***Zygaspis nigra* Broadley and Gans, 1969****BLACK ROUND-SNOUDED WORM LIZARD**

Zygaspis niger Broadley and Gans 1969:1, figs. 1–2. Holotype: NMZB 6698 (formerly UM 6698) (collector R.G. Japp). Type locality: “Kalabo, Barotse Province,” Zambia.

Zygaspis quadrifrons capensis: Laurent (1964a:84).

Zygaspis niger: Broadley and Gans (1975:21).

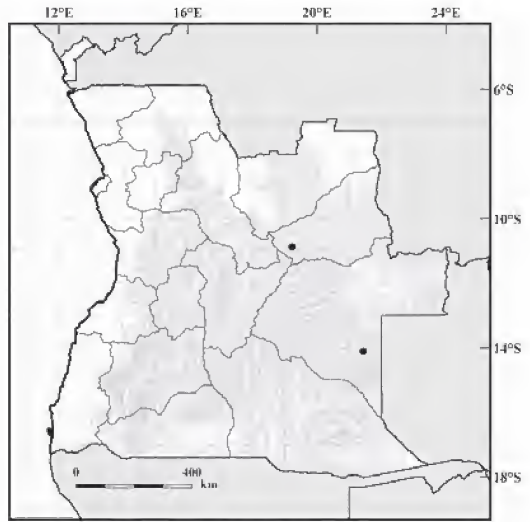
Zygaspis nigra: Broadley and Broadley (1997:13), Branch (1998:124), Gans (2005:39), Broadley and Measey (2016:118).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from eastern Angola, western Zambia, the Caprivi Strip of Namibia and into adjacent northern Botswana.

Occurrences in Angola (Map 164): Published records in Angola derived from the northeastern provinces. **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:84; Broadley and Gans 1969:1; Broadley and Broadley 1997:14). **Moxico:** “Gago Coutinho District” [-14.101654, 21.435308] (Broadley and Gans 1969:1; Broadley and Broadley 1997:14; Broadley and Measey 2016:118, 122); “Colanda 7 km E of Vila Luso” (Broadley and Gans 1975:21; Broadley and Broadley 1997:14; Broadley and Measey 2016:118).

Taxonomic and distributional notes: *Zygaspis nigra* is sympatric with *Z. quadrifrons* (Peters, 1862) in portions of its range (Broadley and Broadley 1997), although allopatric in eastern Angola and Namibia. The typical habitats for this species are miombo woodlands and *Baikiaea* woodlands on sandy soils (Broadley and Broadley 1997; Branch 1998).



MAP 164. Distribution of *Zygaspis nigra* in Angola.

Zygaspis quadrifrons (Peters, 1862)

Amphisbaena quadrifrons Peters 1862a:25. Syntypes: ZMB 4202–4204 (collector C. H. Hahn). Type locality: “Neu-Barmen, im Hereolande, an der Westküste von Afrika” [= Gross Barmen, Otjozondjupa Region], Namibia.

Amphisbaena ambuellensis Monard 1931:93, figs. 1–4. Syntype: MHNC 91.0621 (collector A. Monard). Type locality: “Chimporo” and “Caquindo” [= Tchimpolo and Caquindo], Cunene and Cuando Cubango provinces, Angola respectively.

Amphisbaena ambuellensis: Monard (1937b:65).

Zygaspis quadrifrons quadrifrons: Loveridge (1941c:385), Gans (1967:88).

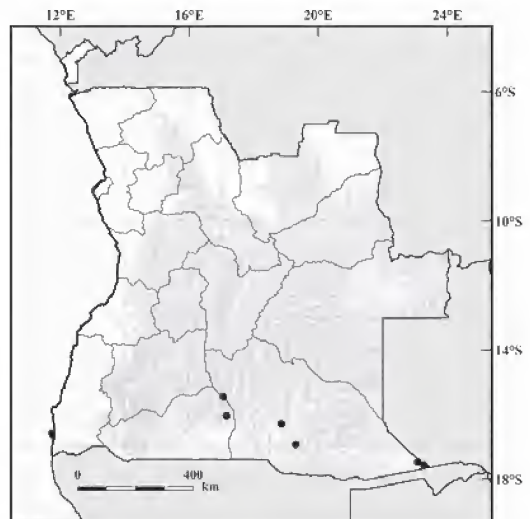
Zygaspis quadrifrons: Broadley and Broadley (1997:14), Gans et al. (1997:44), Gans (2005:39), Conradie et al. (2016:23).

Global conservation status (IUCN): Not Evaluated.

Global distribution: A widespread species distributed from Southern Democratic Republic of Congo, south through Zambia, Zimbabwe, and Botswana to the northern regions of South Africa, west to southwestern Angola and northern Namibia, east to southern Malawi and central Mozambique

Occurrences in Angola (Map 165): The species has been reported from southern Angola, but may be expected to occur in Moxico Province near the border with Zambia as well. **Cunene:** “Chimporo” [-16.03333, 17.15000]

KALAHARI ROUND-SNOUDED WORM LIZARD



MAP 165. Distribution of *Zygaspis quadrifrons* in Angola.

(Monard 1931:93, 1937b:65; Loveridge 1941c:385, 387; Gans 1967:88, 2005:39; Broadley and Broadley 1997:17). **Cuando Cubango:** “Caquindo (Kakindo)” [-15.45000, 17.05000] (Monard 1931:93, 1937b:65; Loveridge 1941c:385, 387; Gans 1967:88, 2005:39; Broadley and Broadley 1997:17); “lower Cuando river (41b)” [-17.46777, 23.07944] (Conradie et al. 2016:9, 11, 23); “lower Cuando river (44b)” [-17.56916, 23.27305] (Conradie et al. 2016:9, 11, 23); “Cuito basin (59)” [-16.28392, 18.84744] (Conradie et al. 2016:9, 12, 23); “Cuito basin (60)” [-16.92367, 19.29675] (Conradie et al. 2016:9, 12, 23).

Taxonomic and distributional notes: Bauer et al. (1995a) and Gans (2005) mistakenly gave the current name of Neu Barmen as Otjimbingue. This is, in fact, the location of another Rhenish mission station operated in the 19th century by the missionary and collector Carl Hugo Hahn. *Amphisbaena ambuellensis* (Monard, 1931) was synonymized with *Z. quadrifrons* with some misgivings by Loveridge (1941c) because he expected to find “racial differentiation” between the fauna of southern Angola and that of South West Africa [Namibia] and Broadley and Broadley (1997) likewise considered that these populations might eventually prove to be distinct.

Family Lacertidae Bonaparte, 1831

Genus *Heliobolus* Fitzinger, 1843

Heliobolus lugubris (Smith, 1838)

BUSHVELD LIZARD

Lacerta lugubris Smith 1838:93. Syntypes: BMNH 1946.8.6.37-45 (collector A. Smith). Type locality: “District immediately beyond the northern frontier of the [Cape] Colony,” South Africa.

Eremias lugubris: Bocage (1867b:221, 1895a:31), Boulenger (1905:111; 1921:239), Monard (1937b:75), Mertens (1938a:437).

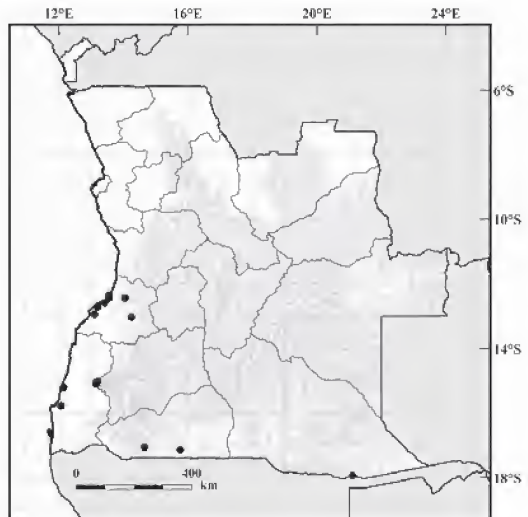
Lampreremias lugubris: Szczerbak (1975:33).

Heliobolus lugubris: Branch (1998:161), Bates et al. (2014:160), Ceriaco et al. (2016a:37, 56), Conradie et al. (2016:24).

Global conservation status (IUCN): Not Evaluated.

Global distribution: Widely distributed, from southern Angola over the Kalahari sands through Namibia, Botswana, southwestern Zimbabwe, southern Mozambique and South Africa.

Occurrences in Angola (Map 166): The species occurs broadly in southern Angola. **Benguela:** “Sighting in Lobito” [-12.35000, 13.55000] (Monard 1937b:75); “Catumbella” [-12.43333, 13.55000] (Bocage 1895a:31); “Quissange” [-12.43333, 14.05000] (Bocage 1895a:31); “Benguella” [-12.58333, 13.41667] (Bocage 1867b:221, 1895a:31; Szczerbak 1975:33); “Dombe” [-12.95000, 13.10000] (Bocage 1895a:31); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:437); “Huxe, Benguella” [-12.71667, 13.20000] (Boulenger 1921:243). **Namibe:** “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:31; Ceriaco et al. 2016b:56); “Namibe-Lubango road, 2 km E of Manguairas, south side of the road” [-15.04361, 13.16000] (Ceriaco et al. 2016a:37); “Capangombe” [-15.10000,



MAP 166. Distribution of *Heliobolus lugubris* in Angola.

13.15000] (Bocage 1895a:31; Ceríaco et al. 2016a:56); “Konondoto, Mossamedes” [-15.20000, 12.15000] (Boulenger 1921:243; Ceríaco et al. 2016a:56); “Namibe-Lubango road, 2 km E of Mangueiras, south side of the road” [-15.03333, 13.16000] (Ceríaco et al. 2016a:37); “Mossamedes” [-15.78333, 12.06667] (Szczerebak 1975:33). **Cunene:** “Ponang Kuma” [-17.05000, 14.65000] (Boulenger 1921:243); “Mupanda” [-17.13333, 15.76667] (Monard 1937b:75). **Cuan-do Cubango:** “Cuito basin (63)” [-17.93611, 21.10269] (Conradie et al. 2016:9, 12, 24). **Undetermined Locality:** “Cuanza R.” (Boulenger 1905:111).

Taxonomic and distributional notes: This widespread species has never been investigated in detail and it is likely that there is regional differentiation and possibly even cryptic taxa within *H. lugubris* as currently construed.

Genus *Holaspis* Gray, 1863

Holaspis guentheri Gray, 1863

BLUE-TAILED TREE LIZARD

Holaspis guentheri Gray 1863a:152, p. 20, fig. 1. Holotype: BMNH 1946.8.7.31 (donor Sir A. Smith, collector unknown). Type locality: None stated, but Gray (1863) considered that it might be a “Tropical-American” form.

Holaspis guentheri: Ferreira (1897b:242), Spawls et al. (2004:163), Chirio and LeBreton (2007:218), Trape et al. (2012:322).

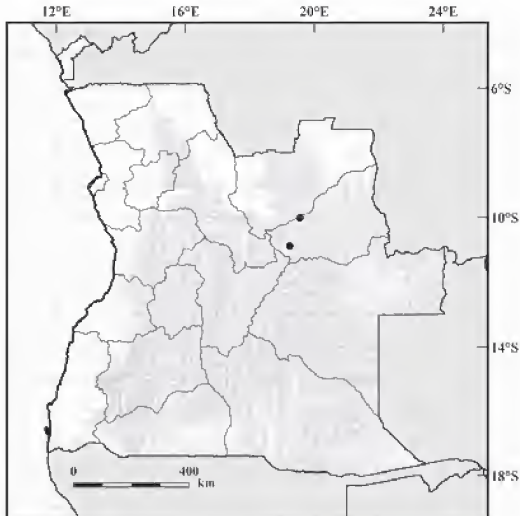
Holaspis guentheri guentheri: Loveridge (1957:227), Laurent (1964a:56), Chirio and LeBreton (2007:218), Trape et al. (2012:322).

Global conservation status (IUCN): Not Evaluated.

Global distribution: This is a lowland forest species, found in open woodland adjacent forest and in some coastal forests, from Uganda and Tanzania in the east to Sierra Leone in the west. In the southwest it reaches Angola.

Occurrences in Angola (Map 167): The few published Angolan records are from the northeast of the country. **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:56); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:56).

Taxonomic and distributional notes: Based on the species global distribution record from “Rio Cuce,” Huíla Province seems doubtful and is probably based on a misidentification. Ferreira’s (1897b) remarks relative to Gray’s (1863) and Boulenger’s (1887) descriptions of the species suggest that the “Rio Cuce” specimen was probably the small, terrestrial gerrhosaurid, *Cordylosaurus subtessellatus* (Smith, 1844), which shares a similar color pattern and does occur in the area.



MAP 167. Distribution of *Holaspis guentheri* in Angola.

Genus *Ichnotropis* Peters, 1854

Ichnotropis bivittata bivittata Bocage, 1866

ANGOLAN ROUGH-SCALED LIZARD

Ichnotropis Dumerilii [*Ichnotropis bivittatus*] Bocage 1866a:43: Syntypes: ZMB 5827 *vide* Bauer et al. (1995b:41), MBL specimen numbers unknown, destroyed by fire 18 March 1978 (collector F.A.P. Bayão); Type locality: “Duque de Bragança” (Bocage 1866a:43) [= Calandula], Malanje Province, Angola.

Ichnotropis capensis: Boulenger (1887:78, 1897:277, 1905:110), Bocage (1895a:30), Ferreira (1897b:243, 1903:15).

Ichnotropis bivittata: Boulenger (1921:182), Schmidt (1933:11), Loveridge (1933:308), Parker (1936:135), Monard (1937b:74), Marx (1956:7), Bauer et al. (1995b:41), Spawls et al. (2004:173), Broadley and Coterill (2004:44), Edward et al. (2013a:110), Ineich and Le Garff (2015:475), Ceriaco et al. (2016b:61).

Ichnotropis capensis bivittata: Hellmich (1957b:59), Loveridge (1957:234), Manaças (1963:237).

Ichnotropis longipes: Frade (1963:253), Monard (1937b:75).

Ichnotropis bivittata bivittata: Laurent (1964a:63).

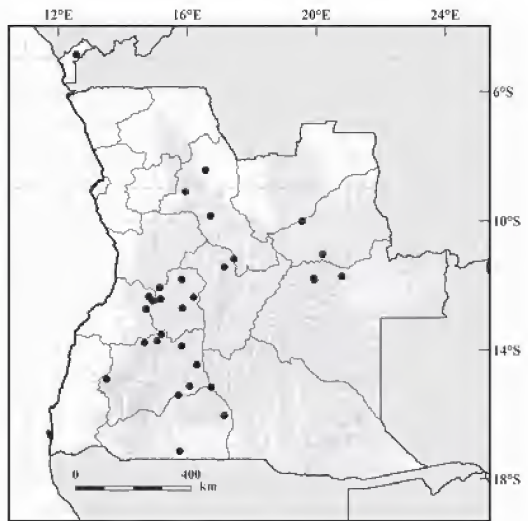
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola east through southern Katanga region of the Democratic Republic of Congo, northern Zambia and northern Malawi to southern Tanzania.

Occurrences in Angola (Map 168): The species is very widespread in the country exclusive of the southwest coastal regions:

Cabinda: “Chyiaca” [-4.86667, 12.56667] (Boulenger 1921:185). **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:63); “Dala” [-11.03333, 20.20000] (Monard 1937b:75). **Malanje:** “Bange N’gola” [-8.43333, 16.56667] (Boulenger 1905:110, 1921:185); “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:43, 1895a:30; Boulenger 1887:78, 1905:110, 1921:185; Ferreira:1903:15; Loveridge 1933:308, 1957:234; Bauer et al. 1995b:41); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:61). **Moxico:** “Lago Cameia” [-11.71667, 20.80000] (Manaças 1963:237); “Fazenda Santa Cruz, Luso” [-11.78333, 19.91667] (Manaças 1963:237); “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1963:237). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1933:11; Marx 1956:7); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:11; Marx 1956:7). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:74); “Galanga” [-12.06667, 15.15000] (Bocage 1895a:30); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:135; Marx 1956:7); “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:59); “Santo-Amaro” [-12.70000, 15.85000] (Monard 1937b:74). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:30); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:30); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:74). **Huíla:** “Rio Cuce” [-13.51667, 15.20000] (Ferreira 1897b:243); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:30; Boulenger 1921:185); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:74); “Sangevé” [-13.88333, 15.83333] (Monard 1937b:74); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:74); “Lobango” [-14.91667, 13.50000] (Bocage 1895a:30); “Kasinga” [-15.13333, 16.08333] (Monard 1937b:74); “Kulüü” [-15.41667, 15.73333] (Monard 1937b:74). **Cunene:** “Riv. Mbalé” [-15.16667, 16.75000] (Monard 1937b:75); “Chimporo” [-16.03333, 17.15000] (Monard 1937b:75); “Mupanda” [-17.13333, 15.76667] (Monard 1937b:75). **Undetermined locality:** “Benguela-Bihé” (Boulenger 1921:185).

Taxonomic and distributional notes: Bocage (1866a) coined the name *I. bivittatus*, but based



MAP 168. Distribution of *Ichnotropis bivittata bivittata* in Angola.

on information from Albert Günther at the British Museum, he was initially convinced that his material was conspecific with *I. dumerilii* (Smith, 1849) [= *I. capensis* (Smith, 1838)] and under that account heading he listed: “*Tropidosaura Dumerilii*. Smith. *Ichnotropis bivittatus*. Nob. Mss.” Peters (1882) argued for the validity of Bocage’s species and suggested that the specimen of *I. dumerilii* that Günther had compared it to might not have been Smith’s type specimen. Because of this confusion *I. bivittata* was for some time mentioned in the literature as *I. capensis* (e.g., Bocage 1895a; Boulenger 1887, 1897, 1905; Ferreira 1897b, 1903). No modern revision of *Ichnotropis* has yet been carried out (Edwards et al. 2013a) and the status of a number of taxa remains equivocal.

***Ichnotropis bivittata pallida* Laurent, 1964**

PALE ROUGH-SCALED LIZARD (Endemic)

Ichnotropis bivittata pallida Laurent 1964a:64, fig. 19. Holotype: MD 1854 (collector A. Barros Machado).

Type locality: “Boca da Humpata, Huíla” [Huíla Province], Angola.

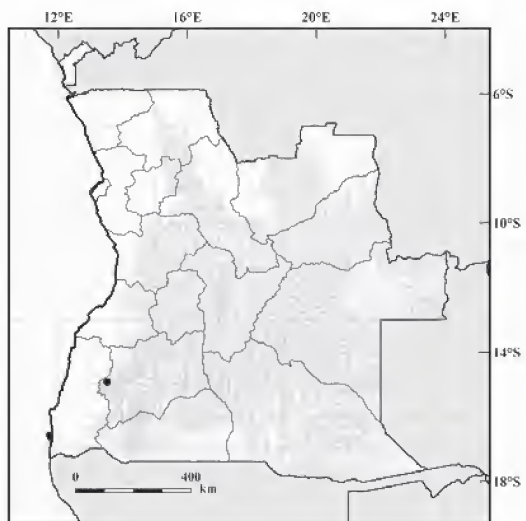
Ichnotropis bivittata pallida: Laurent (1964a:64),
Edward et al. (2013a:110).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 169): The species *I. b. pallida* has only been recorded from its type locality on the southwestern plateau. **Huíla:** “Boca da Humpata” [-14.93333, 13.51667] (Laurent 1964a:64).

Taxonomic and distributional notes: Laurent (1964a) suggested that some specimens referred to *Ichnotropis bivittata* by Monard (1937b) from the Cunene Basin might belong to *I. b. pallida*. The status of *I. bivittata pallida* remains equivocal, although Ineich and Le Garff (2015) recognized it as a valid sub-species.



MAP 169. Distribution of *Ichnotropis bivittata pallida* in Angola.

***Ichnotropis capensis capensis* (Smith, 1838)**

THE CAPE ROUGH-SCALED LIZARD

A[lgysa] capensis Smith 1838:94. Syntypes: lost *fide* FitzSimons (1943). Type locality: “sandy deserts around Latakoo” [= Lithako, approx. 27°S, 24°E, i.e. btwn. Kuruman and Taungs, N. Cape Province,] South Africa.

Ichnotropis capensis: Boulenger (1897:277), Laurent (1964a:63), Branch (1998:162), Broadley and Cotterill (2004:22), Broadley (2004:326), Bates et al. (2014:161).

Ichnotropis capensis capensis: Branch and McCartney (1992:1).

Ichnotropis spp.: Conradie et al. (2016:24).

Global conservation status (IUCN): Not Evaluated.

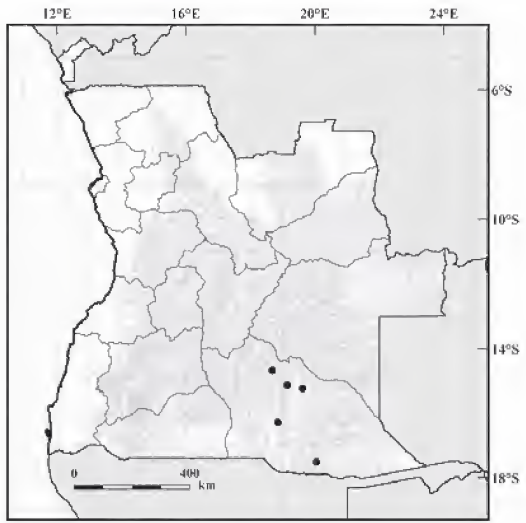
Global distribution: The typical form of the species is known from the Democratic Republic of Congo and Angola, south into Namibia and eastwards to Mozambique and South Africa.

Occurrences in Angola (Map 170): *Ichnotropis capensis capensis* has been recorded from Cuando Cubango Province. **Cuando Cubango:** “approximately 50 km E of Cuito Cuanavale” [-15.23333, 19.61667] (Branch and McCartney 1992:1); “Cuito basin (25)” [-15.139194,

19.14350] (Conradie et al. 2016:8, 9, 24); “Cuito basin (30b)” [-17.51194, 20.04305] (Conradie et al. 2016:8-9, 24); “Cuito basin (59)” [-16.28392, 18.84744] (Conradie et al. 2016:9, 12, 24); “Cuito basin (55)” [-14.68478, 18.67369] (Conradie et al. 2016:9, 12, 24).

Taxonomic and distributional notes:

Many early records from Angola attributed to *I. capensis* in fact refer to *I. bivittata* Bocage, 1866 (see above). Boulenger (1897) reported the first northern record for the species from “Kuango,” presumably in Malanje Province, which in the light of current knowledge does not correspond to the distribution of the *I. capensis* (Branch 1998; Broadley and Catterill 2004; Broadley 2004; Bates et al. 2014). Although this and most Angolan records were recognized by Monard (1937b) and Laurent (1964a) as referable to *I. bivittata*, confusion regarding the application of the name *I. capensis* in Angola remains today. The record of Branch and McCartney (1993) from Cuando Cubango Province is regarded as the first record of the nominotypical form in Angola (Branch 1998; Broadley 2004; Bates et al. 2014), but extensive fieldwork by Conradie in southeastern Angola has yielded additional records (Conradie et al. 2016).



MAP 170. Distribution of *Ichnotropis capensis capensis* in Angola.

***Ichnotropis capensis overlaeti* de Witte and Laurent, 1942 LUNDA ROUGH-SCALED LIZARD
(Endemic)**

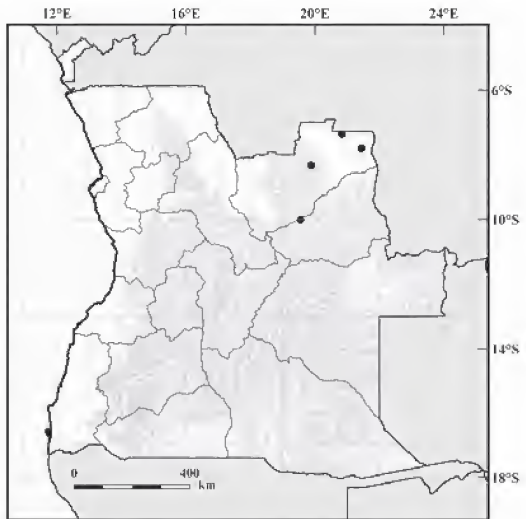
Ichnotropis overlaeti de Witte and Laurent 1942a:173. Holotype: MRAC 9691 (collector F.G. Overlaet). Type locality: “Kapanga (Lulua)” [= Lulua District, Kasai-Occidental Province,] Democratic Republic of Congo.

Ichnotropis capensis overlaeti: Laurent (1950a:12, 1964a:61).

Global conservation status (IUCN): Not Evaluated.

Global distribution: Only reported from Angola, although expected to occur in the Katanga region of the Democratic Republic of Congo.

Ocurrences in Angola (Map 171): *Ichnotropis c. overlaeti* has recorded from north-eastern regions of Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:12, 1964a:61); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:12); “Caluango, R. Caquele, affluent Luangue” [-8.33333, 19.88333] (Laurent 1964a:61). **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:61).



MAP 171. Distribution of *Ichnotropis capensis overlaeti* in Angola.

Taxonomic and distributional notes: The status of *Ichnotropis overlaeti* has not been critically assessed. Its substantially disjunct distribution relative to the nominotypical form suggests that it is likely valid at either a subspecific or specific level.

***Ichnotropis microlepidota* Marx, 1956**

MARX'S ROUGH-SCALED LIZARD (Endemic)

Ichnotropis microlepidota Marx 1956:5, fig. 1. Holotype: FMNH 74285 (collector G. Heinrich). Type locality: "Mt. Moco" [= Serra do Moco], Huambo Province, Angola.

Ichnotropis bivittata: Parker (1936:135).

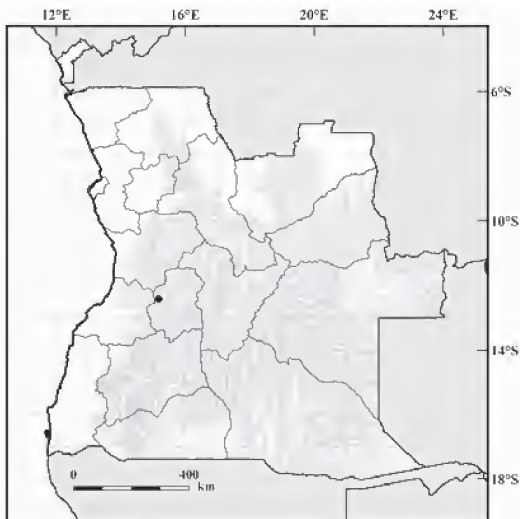
Ichnotropis microlepidota: Marx (1959:461), Edwards et al. (2013a:110), Ineich and Le Graff (2015:477).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 172): The species is known only for the type locality "Mt. Moco" in Huambo Province. **Huambo:** "Mt. Moco" [-12.41667, 15.18333] (Parker 1936:135; Marx 1956:5, 1959:461).

Taxonomic and distributional notes: Parker (1936) identified a specimen from "Mt. Moco" as *Ichnotropis bivittata* (Bocage, 1966), however he noted that the specimen had some different characters, which might represent racial differentiation. Marx (1956) included this specimen, along with a series of lizards also from "Mt. Moco" as *Ichnotropis microlepidota*. According to Edwards et al. (2013a) and Ineich and Le Graff (2015) the status of this taxon remains equivocal, until further review of the genus with new material for molecular phylogenetic analyses.



MAP 172. Distribution of *Ichnotropis microlepidota* in Angola.

Genus *Meroles* Gray, 1838

***Meroles anchietae* (Bocage, 1867)**

ANCHIETA'S DUNE LIZARD

Pachyrhynchus Anchietae Bocage 1867b:227, figs. 1–2. Holotype: MBL specimen number unknown (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: "Mossamedes" subsequently changed to "Rio Coroca, dans le littoral de Mossamedes," Namibe Province, Angola (Bocage 1895a:33).

Pachyrhynchus Anchietae: Bocage (1895a:33, 1897a:195).

Aporosaura anchietae: Boulenger (1887:117, 1921:376), Loveridge (1936a:63), Frade (1963:253), Arnold (1989:213, 1991:784).

Meroles anchietae: Branch (1998:164), Ceriaco et al. (2016a:36, 56).

Global conservation status (IUCN): Not Evaluated.

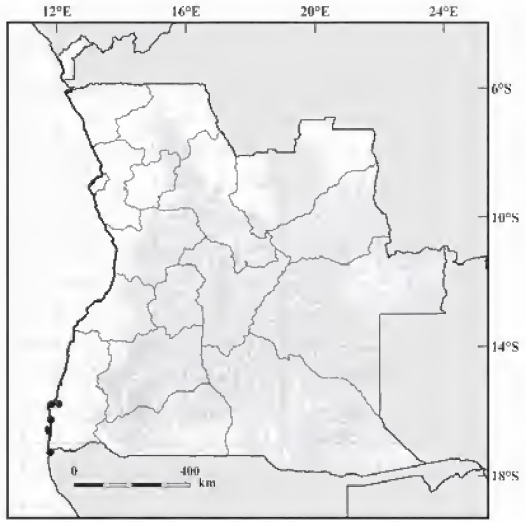
Global distribution: The species is known from the dunes of the Namib Desert in southwestern Angola and western Namibia.

Occurrences in Angola (Map 173): The species occurs in the desert regions of Namibe Province. **Namibe:** "Rio Coroca, dans le littoral de Mossamedes" [-15.78333, 12.06667] (Bocage 1867b:227, 1895a:33, 1897a:195; Boulenger 1887:117, 1921:376; Loveridge 1936a:63; Ceriaco et al. 2016a:56); "Porto Alexandre" [-15.80000, 11.83333] (Ceriaco et al. 2016a:36); "Praia do Navio

coastal dunes, ca. 124 km SSW of Namibe” [-16.27475, 11.81806] (Ceríaco et al. 2016a:36); “Foz de Cunene” [-17.28333, 11.80000] (Ceríaco et al. 2016a:36).

Taxonomic and distributional notes:

Arnold (1989) demonstrated that *Aporosaura* Boulenger, 1887, the generic name under which this species was long known, is a synonym of *Meroles* Gray, 1838. Until recently the only published data for Angola was from the type locality, but recently an individual was collected in “Praia do Navio coastal dunes, ca. 124 km SSW of Namibe” (Ceríaco et al. 2016a). In the Museu de História Natural da Universidade do Porto, Portugal, the Francisco Newton collections include uncatalogued specimens of this species also from “Mossamedes” (M. Marques and L. Ceríaco, pers. obs.) and the Ditsong National Natural History Museum has some material collected by Wulf Haacke from “Porto Alexandre” and “Foz de Cunene” (Ceríaco et al. 2016a). This species is endemic to the Namib Desert, from the Klinghardt Mountains in southern Namibia to southern Angola (Branch 1998).



MAP 173. Distribution of *Meroles anchietae* in Angola.

***Meroles reticulatus* (Bocage, 1867)**

RETICULATE SAND LIZARD

Scapateira (?) *reticulata* Bocage 1867b:225. Syntypes: MBL specimen number unknown (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Mossamedes, Western Africa” restricted to “Rio Coroca,” Namibe Province, Angola by Bocage (1897a:195).

Scapateira reticulata: Bocage (1870:68, 1895a:32, 1897a:195), Strauch (1867:404), Boulenger (1887:111, 1921:357), Loveridge (1936a:63).

Scapteira serripes: Boulenger (1887:111).

Meroles reticulatus: Szczerbak (1975:45), Arnold (1989:213), Branch (1998:167), Bauer and Günther (1995:55), Ceríaco et al. (2016a:36, 56).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from the gravel plains of the Namib Desert in southwestern Angola and northern Namibia.

Ocurrences in Angola (Map 174): The species occurs in the southwestern Angola near the coast. **Benguela:** “Benguella” [-12.58333, 13.41667] (Boulenger 1887:111; Szczerbak 1975:45; Bauer and Günther 1995:55). **Namibe:** “Mossamedes” [-15.78333, 12.06667] (Bocage 1867a:225; Boulenger 1887:112; Loveridge 1963:63; Ceríaco et al. 2016a:56);



MAP 174. Distribution of *Meroles reticulatus* in Angola.

“Rio Coroca” [-15.78333, 12.06667] (Bocage 1895a:32, 1897a:195; Boulenger 1887:111; Bauer and Günther 1995:55; Ceríaco et al. 2016a:56); “Praia do Navio coastal dunes, ca. 124 km SSW of Namibe” [-16.27758, 11.82236] (Ceríaco et al. 2016a:36).

Taxonomic and distributional notes: Bocage’s (1867a) doubts about the species’ inclusion in *Scapteira* were laid to rest by Strauch (1867). Boulenger (1887, 1921) noted that one of the types of *S. reticulata* from “Benguella” was present in Berlin. Bauer and Günther (1995) identified this specimen as ZMB 6475, and although not found at the time of their writing, it has since been located. However, although this specimen was collected by d’Anchieta and received from Bocage, it cannot be one of the types, as all five syntypes were from Mossamedes. Similarly to *M. anchietae*, there are very few published records for the species in Angola.

Meroles squamulosus (Peters, 1854)

COMMON ROUGH-SCALED LIZARD

Ichnotropis squamulosa Peters 1854:617. Syntypes: ZMB 6614, 6615, 6616 *fide* Bauer et al. (1995:58). Type locality: “Tette” [= Tete], Mozambique.

Ichnotropis squamulosa: Monard (1937b:74), Loveridge (1957:234), Branch (1998:163), Edwards et al. (2012:4), Engleder et al. (2013:132).

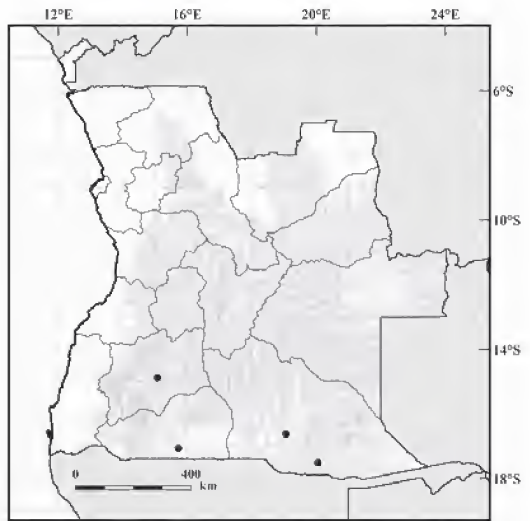
Meroles squamulosus: Edwards et al. (2013a:101), Bates et al. (2014:164), Conradie et al. (2016:25).

Global conservation status (IUCN): Not Evaluated.

Global distribution: *Meroles squamulosus* occurs from Angola and Tanzania southwards through Zimbabwe, central Mozambique, Botswana, eastern Namibia, and northeastern South Africa.

Occurrences in Angola (Map 175): The species occurs in southern Angola east of the arid southwestern zone. **Huíla:** “Kapelongo” [-14.88333, 15.08333] (Monard 1937b:74). **Cunene:** “Pereira de Eça [= Ondijiva]” [-17.06666667, 15.73333333] (Conradie et al. 2016:25). **Cuando Cubango:** “Cuito basin (30e)” [-17.51430, 20.05527] (Conradie et al. 2016:9, 10, 25); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9, 12, 25).

Taxonomic and distributional notes: A recent analysis using nuclear and mitochondrial sequence data revealed that this species, long known by the name *Ichnotropis squamulosa*, is strongly supported as a member of the genus *Meroles* (Edwards et al. 2012; Engleder et al. 2013; Edwards et al. 2013a). Confusion with members of the genus *Ichnotropis* is understandable, as they are very similar morphologically (Edwards et al. 2012; Edwards et al. 2013a). The geographic range and habitat of *I. squamulosa* overlaps with that of a number of *Ichnotropis*, but not that of other *Meroles* (Branch 1998).



MAP 175. Distribution of *Meroles squamulosus* in Angola.

Genus *Nucras* Gray, 1838*Nucras scalaris* Laurent, 1964

SCALED SANDVELD LIZARD (Endemic)

Nucras scalaris Laurent 1964a:58, fig. 17. Holotype: MD 5401. Type locality: “Alto Chicapa,” Lunda Sul, Angola.

Nucras scalaris: Arnold (1989:21), Bischoff (1991:20), Richman and Böhm (2013).

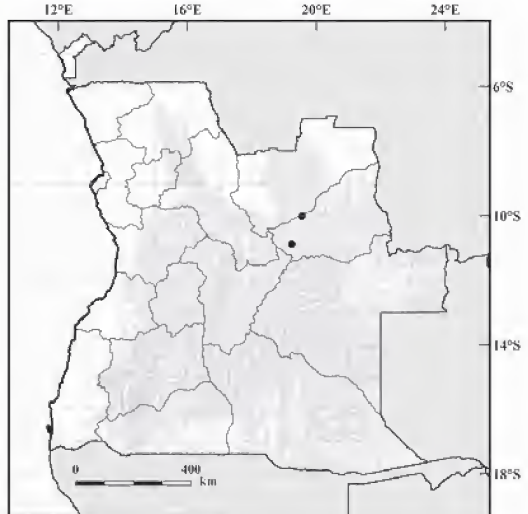
Global conservation status (IUCN): Data Deficient

Global distribution: The species is endemic to Angola.

Occurrences in Angola (Map 176): The species is only known from two localities in northeastern Angola. **Lunda Sul:** “Alto Cuilo” [-10.01667, 19.55000] (Laurent 1964a:58; Richman and Böhm 2013); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:58; Richman and Böhm 2013).

Taxonomic and distributional notes:

This is a poorly known species and further research is needed in order to assess its taxonomy, distribution and conservation status (Bischoff 1991; Richman and Böhm 2013). We recently examined the type specimens (holotype and three paratypes), which had not been seen by researchers since Laurent (1964a), owing to the inaccessibility of the Dundo collection.



MAP 176. Distribution of *Nucras scalaris* in Angola.

Nucras aff. *tessellata* (Smith, 1838)

WESTERN SANDVELD LIZARD

L[acerta]. tessellata (Smith 1838:92). Lectotype: BM 1946.8.6.3 (formerly BMNH 65.5.4.40, along with paralectotype, now BMNH 1946.8.6.2) (collector A. Smith) designated by Broadley (1972:27). Type locality: “Eastern parts of the Cape Colony,” South Africa; “Districts on the western coast of Southern Africa, particularly Little Namqualand” *fide* Broadley (1972:27).

Nucras tessellata var. *taeniolata*: Bocage (1895a:30).

Nucras tessellata var. *taeniolata*: Boulenger (1910:474).

Nucras intertexta var. *holubi*: Boulenger (1917:208, 1920:20).

Nucras tessellata: Monard (1937b:73), Laurent (1964a:56).

Nucras ornata: Broadley (1965b:23).

Nucras tessellata: Broadley (1972:30).

Nucras tessellata: Arnold (1989:213), Edwards et al. (2013b:4), Bates et al. (2014:171), Ceríaco et al. (2016b:56).

Global conservation status (IUCN): Not applicable (taxonomic status unclear).

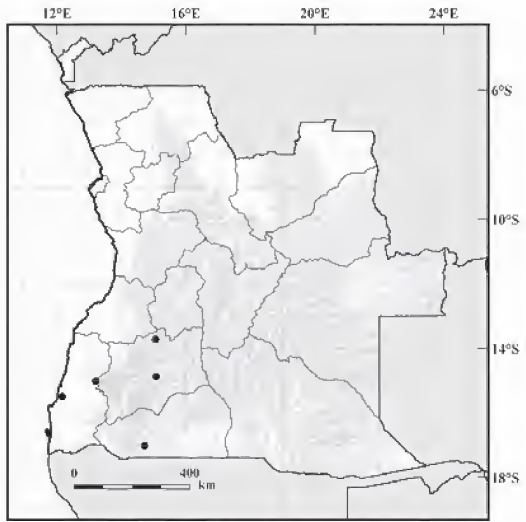
Global distribution: The nominal species is distributed from the southwestern Western Cape Province in South Africa, through central Namibia and southwestern Botswana. The taxon occurring in Angola is certainly a different species.

Occurrences in Angola (Map 177): The species occurs in the southwestern Angola, from the Namibe desert to the plateau at Caconda. **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:30; Broadley 1972:31); “Kapelongo” [-14.88333, 15.08333] (Monard 1937b:73; Broadley 1972:31). **Namibe:** “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:30; Broadley 1972:31;

Ceríaco et al. 2016b:56); “km 34 de la route de Moçâmedes à Sá da Bandeira” [-15.50000, 12.16667] (Laurent 1964a:56; Broadley 1972:31; Ceríaco et al. 2016b:56). **Cunene:** “Donguena, Mossamedes” [-17.01667, 14.71667] (Boulenger 1910:472, 1917:210, 1920:20; Broadley 1972:31).

Taxonomic and distributional notes:

Bocage (1895a) recorded *Nucras* from “Maçonjo” and “Caconda” collected by Anchieta and identified them as belonging to *N. taeniolata* (Smith, 1838). Boulenger (1910) also allocated his specimens from “Dongoena” (= Mossamedes *fide* Boulenger 1910) to this species, but subsequently (Boulenger 1917, 1920) transferred them to *N. holubi* (Steindachner, 1882). Broadley (1972) revised the *Nucras tessellata* complex and recognised three subspecies: *Nucras tessellata tessellata*, *Nucras tessellata livida* (now a full species) and an unnamed subspecies of *Nucras tessellata* from Angola. Broadley also noted that the Angolan specimens were similar to *N. taeniolata*, but believed that more material was needed before the status of Angolan populations could be settled. Edwards et al. (2013b) confirmed the sister species relationship of *N. tessellata* to *N. taeniolata*, however, a detailed molecular investigation is still needed to resolve the position and status of Angolan *Nucras*, which may represent one or more new species (W.R. Branch, pers. comm., January 2017).



MAP 177. Distribution of *Nucras* aff. *tessellata* in Angola.

Genus *Pedioplanis* Fitzinger, 1843

***Pedioplanis benguellensis* (Bocage, 1867)**

BOCAGE'S SAND LIZARD

Eremias benguellensis Bocage 1867b:221, 1867d:229. Holotype: MBL specimen number unknown (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: “Benguella” [= Benguela], Benguela Province, Angola.

Eremias benguelensis: Boulenger (1921:287), Parker (1936:134).

Eremias benguellensis: Monard (1937b:73), Laurent (1964a:60).

Eremias sp.: Bocage (1887b:203).

Eremias namaquensis: Boulenger (1887:91), Bocage (1895a:31).

Eremias undata: Boulenger (1921:283).

Eremias undata undata: Laurent (1964a:60).

Mesalina benguelensis: Szczerbak (1975:24).

Pedioplanis undata: Arnold (1989:213), Branch (1998:173), Makokha et al. (2007:623), Haacke (2008:90).

Pedioplanis benguellensis: Arnold (1989:213), Bauer and Günther (1995:55), Branch (1998:173), Makokha et al. (2007:623), Conradie et al. (2012b:93), Ceríaco et al. (2016a:37, 56).

Pedioplanis namaquensis: Branch (1998:172), Makokha et al. (2007:623).

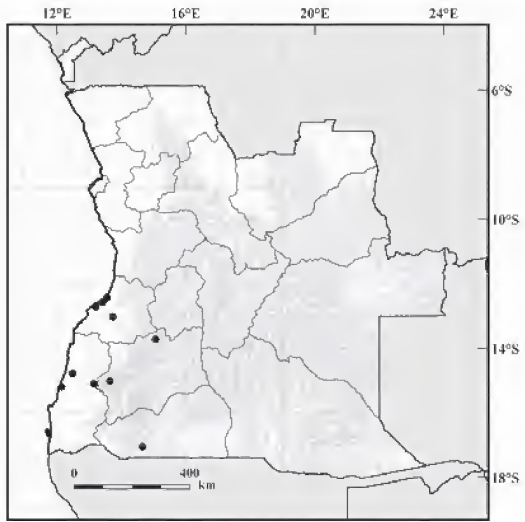
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and Namibia.

Occurrences in Angola (Map 178): The species occurs in the southwestern Angola. **Benguela:** “Catumbella” [-12.43333, 13.55000] (Bocage 1895a:31; Monard 1937b:73); “Benguella” [-12.58333, 13.41667] (Bocage 1867b:221, 1867d:229, 1895a:31; Monard 1937b:73; Szczerbak

1975:24; Bauer and Günther 1995:55); “Huxe, Benguella” [-12.71667, 13.20000] (Boulenger 1921:286, 288-289); “Catengue” [-13.03333, 13.73333] (Parker 1936:134). **Huíla**: “Caconda” [-13.73333, 15.06667] (Bocage 1895a:31; Monard 1937b:73). **Namibe**: “Namibe-Lubango road, road marker 59, 1.8 km W (by road) from Caraculo, north side of the road” [-15.01606, 13.64483] (Ceríaco et al. 2016a:37); “Maconjo (= Fazenda Mucungo)” [-14.782192, 12.486557] (Boulenger 1921:286; Bauer and Günther 1995:55; Conradie et al. 2012b:93; Ceríaco et al. 2016a:56); “Capan-gombe” [-15.10000, 13.15000] (Bocage 1895a:31; Monard 1937b:73; Ceríaco et al. 2016a:56); “Mossamedes” [-15.20000, 12.15000] (Bocage 1887b:203, 1895a:31; Monard 1937b:73; Szczerbak 1975:24; Ceríaco et al. 2016a:56). **Cunene**: “Ponang Kuma” [-17.05000, 14.65000] (Boulenger 1921:289).

Taxonomic and distributional notes: Bocage provided descriptions of this species in two different papers, which appeared back-to-back in the same issue of the “Jornal de Sciencias Mathematicas, Physicas e Naturaes.” In Bocage (1867d) the description is short and *benguellensis* is spelled with two “l”s, whereas in Bocage (1867b) it is more extensive and the specific epithet is spelled with only one “l.” Although most authors have cited the more extensive description in Bocage (1867b), all except Boulenger (1921), Parker (1936) and Szczerbak (1975), including Bocage himself in later works, have adopted the spelling of the shorter description (Bocage 1867d). We here follow page priority and employ the prevailing spelling, *benguellensis*. *Eremias benguellensis* was later considered by Bocage (1895a) as a synonym of *E. namaquensis* Duméril and Bibron, 1839. Boulenger (1921) reinstated *Eremias. benguellensis* as a full species, diagnosing it from *E. namaquensis*. This interpretation was subsequently followed by several authors, including Parker (1936), Monard (1937b) and Laurent (1964a), although *P. benguellensis* has frequently been synonymized with *P. namaquensis*. Based on phylogenetic analysis carried out by Conradie et al. (2012b), material referable to *P. benguellensis* does not fall within the same lineage as (nor is it sister to) *P. namaquensis*, despite past speculation to the contrary (Bocage 1895a; Branch 1998; Makokha et al. 2007). Previous records of *P. namaquensis* from southern Angola should be considered misidentifications, since there is no support for the occurrence of *P. namaquensis* in Angola (Conradie et al. 2012b).



MAP 178. Distribution of *Pedioplanis benguellensis* in Angola.

Pedioplanis haackei Conradie, Measey, Branch and Tolley, 2012

HAACKE'S SAND LIZARD (Endemic)

Pedioplanis haackei Conradie et al. 2012b:101, figs. 3A, B. Holotype: PEM R18465 (collectors W.R. Branch, W. Conradie, G.J. Measey and K.A. Tolley) Type locality: “along the road to Tambor, Namibe Province,” Namibe Province, Angola.

Eremias undata undata (part): Laurent (1964a:60).

Pedioplanis haackei: Ceríaco et al. (2016b:37, 56).

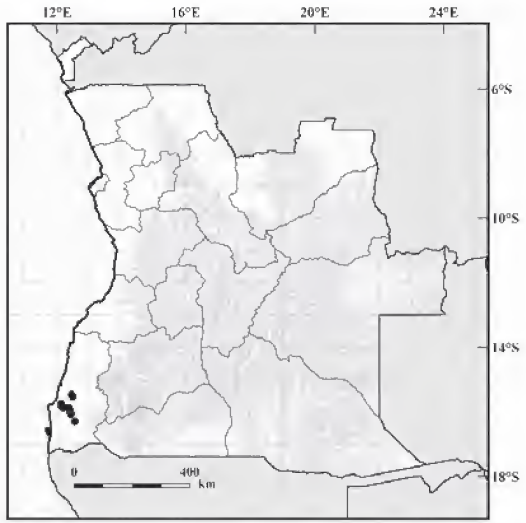
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is endemic to Angola.

Occurrences in Angola (Map 179):

Endemic to southwestern Namibe Province, mainly on sandy planis surrounding granite outcrops. **Namibe:** “5 km NW (by road) of Pico Azevedo” [-15.47600, 12.46150] (Ceríaco et al. 2016a:37); “Pico Azevedo” [-15.53400, 12.49197] (Ceríaco et al. 2016a:37); “Red Canyon at Lake Arco” [-15.74597, 12.13989] (Conradie et al. 2012b:101; Ceríaco et al. 2016a:56); “10 km south of Lake Arco” [-15.83044, 12.14125] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “Road to Tambor” [-15.87606, 12.20583] (Conradie et al. 2012b:101; Ceríaco et al. 2016a:56); “Road to Tambor at giant Welwitchia” [-15.88778, 12.36417] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “Road from Lake Arco to Espinheira” [-15.91356, 12.39522] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “Iona National Park, north of Tambor” [-15.99539, 12.40647] (Ceríaco et al. 2016a:37); “Omauha Lodge” [-15.99681, 12.40683] (Conradie et al. 2012a: Online Supplementary Material; Ceríaco et al. 2016b:37); “Road to Tambor” [-16.05847, 12.42597] (Conradie et al. 2012a: Online Supplementary Material; Ceríaco et al. 2016a:56); “20 km north of Omauha Lodge” [-16.07414, 12.43328] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “Pedita hot-springs, south side of the river” [-16.29381, 13.56033] (Ceríaco et al. 2016b:37).

Taxonomic and distributional notes: This recently described species was likely previously mistaken for one of its superficially similar congeners, *Pedioplanis undata* (Smith, 1838). The latter was first signaled in southern Angola by Boulenger (1921), who referred specimens from “Maconjo [= Fazenda Mucungo]” and “Benguella” to it. Laurent (1964a) discussed additional Angolan material and the presence of the species in the country was long widely accepted by the scientific community (Branch 1998; Makokha et al. 2007; Haacke 2008). However, since Laurent (1964a), the status of *P. undata* has changed considerably. According to Conradie et al. (2012b) *P. undata* is not present in Angola and, as currently understood, the species is endemic to Namibia. Laurent’s records were considered by Conradie et al. (2012b) to correspond *Pedioplanis haackei* Conradie, Measey, Branch and Tolley, 2012 and *Pedioplanis huntleyi* Conradie, Measey, Branch and Tolley, 2012. *Pedioplanis “undata”* from outside the accepted range of these two species are likely to represent one or more undescribed taxa (W.R. Branch, pers. comm., January 2017).



MAP 179. Distribution of *Pedioplanis haackei* in Angola.

***Pedioplanis huntleyi* Conradie, Measey, Branch and Tolley, 2012 HUNTLEY’S SAND LIZARD
(Endemic)**

Pedioplanis huntleyi Conradie et al. 2012:105, figs. 4A, B. Type: Holotype, PEM R18479 (collectors W.R. Branch, W. Conradie, G.J. Measey and K.A. Tolley). Type locality: “road to Oncocua, 7 km from Iona, Namibe Province” Namibe Province, Angola.

Eremias undata undata (part): Laurent (1964a:60).

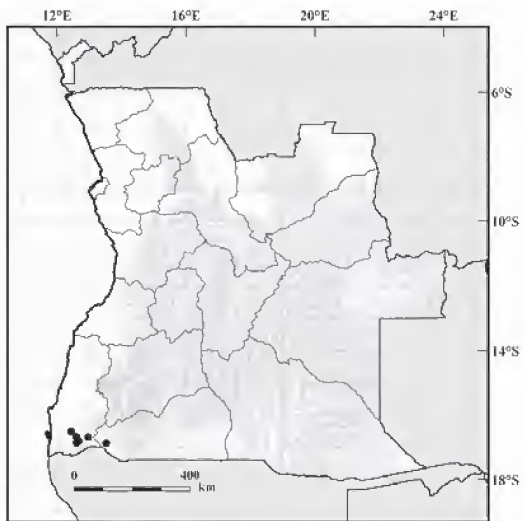
Pedioplanis huntleyi: Ceríaco et al. (2016a:56).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is endemic to southwestern Angola.

Occurrences in Angola (Map 180): The species is known from southwestern Angola in Namibe and Cunene provinces near the Namibian border. **Namibe:** “40 km south of Omauha lodge” [-16.51164, 12.44761] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “14 km west of Moimba” [-16.67947, 12.61275] (Conradie et al. 2012b:105, Online Supplementary Material; Ceríaco et al. 2016a:56); “23 km West of Moimba” [-16.67947, 12.97397] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “26 km East of Iona” [-16.82928, 12.62103] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “16 km East of Iona” [-16.79797, 12.68050] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “8 km North East of Iona” [-16.82928, 12.62103] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56); “Road to Onocua 7 km NE from Iona” [-16.85831, 12.61275] (Conradie et al. 2012b:105; Ceríaco et al. 2016a:56); “26 km SE of Onocua” [-16.86881, 13.52756] (Conradie et al. 2012b: Online Supplementary Material; Ceríaco et al. 2016a:56).

Taxonomic and distributional notes: This recently described species was likely previously mistaken for one of its superficially similar congeners, *Pedioplanis undata* (Smith, 1838). Laurent (1964a) cited Angolan material of the latter species and its presence in the country was long widely accepted (e.g., Branch 1998; Makokha et al. 2007; Haacke 2008). However, based on the phylogenetic analysis by Conradie et al. (2012b) *P. undata* is not present in Angola and, as currently understood, the species is endemic to Namibia. Laurent’s records were considered by Conradie et al. (2012b) to correspond *Pedioplanis haackei* Conradie, Measey, Branch and Tolley, 2012 and *Pedioplanis huntleyi* Conradie, Measey, Branch and Tolley, 2012. *Pedioplanis “undata”* from outside the accepted range of these two species are likely to represent one or more undescribed taxa (W.R. Branch, pers. comm., January 2017).



MAP 180. Distribution of *Pedioplanis huntleyi* in Angola.

Family Cordylidae Mertens, 1937

Genus *Chamaesaura* Schneider, 1801

Chamaesaura anguina oligopholis Laurent, 1964

ANGOLAN SNAKE LIZARD

Chamaesaura anguina oligopholis Laurent 1964a:50. Holotype: MD 6003 (collector A. Serralheiro). Type locality: “Calonda, Lunda,” Lunda Norte Province, Angola.

Chamaesaura anguina oligopholis: Branch (1998:185), Stanley et al. (2011:65), Bates et al. (2014:184).

Global conservation status (IUCN): Not Evaluated.

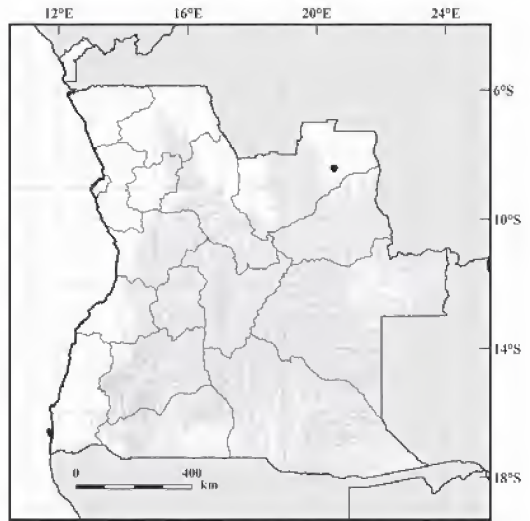
Global distribution: The species is known from Angola and the adjacent southern Democratic Republic of Congo.

Occurrences in Angola (Map 181): The species is known only from a single locality in Lunda

Norte Province. **Lunda Norte:** “Calonda” [-8.41667, 20.53333] (Laurent 1964a:50).

Taxonomic and distributional notes:

Stanley et al. (2011) recognized two subspecies of *Chamaesaura anguina* (Linnaeus, 1758), the isolated *Chamaesaura anguina oligopholis* Laurent, 1964 from Angola and eastern Democratic Republic of Congo, and *C. a. anguina* (Linnaeus, 1758) from South Africa and Swaziland (Branch 1998; Bates et al. 2014). The relationship between the two subspecies remains problematic (Stanley et al. 2011) and a molecular assessment is required to determine the extent of divergence (Bates et al. 2014), although it is probable that these highly disjunct forms are specifically distinct.



MAP 181. Distribution of *Chamaesaura anguina oligopholis* in Angola.

***Chamaesaura miopropus* Boulenger, 1894**

ZAMBIAN SNAKE LIZARD

Chamaesaura miopropus Boulenger 1895b:732. Holotype: BMNH 1946.8.29.49 (collector A. Carson). Type locality: “Fwambo, British Central Africa” [= Zambia].

Chamaesaura macrolepis: Bocage (1895a:25), Monard (1937b:61), Hellmich (1957b:52).

Chamaesaura miopropus: Schmidt (1933:10), Loveridge (1944b:107, 1957:226), Stanley et al. (2011:65), Bates et al. (2014:185).

Chamaesaura macrolepis miopropus: Branch (1998:185), Spawls et al. (2004:189), Broadley and Cotterill (2004:43).

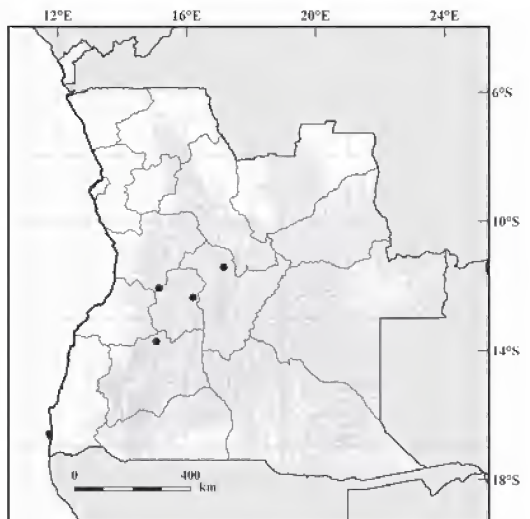
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola east to southern Tanzania.

Occurrences in Angola (Map 182): The species occurs in central-west Angola. **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:10; Loveridge 1944b:108). **Huambo:** “Galanga” [-12.06667, 15.15000] (Bocage 1895a:25; Monard 1937b:61; Loveridge 1944b:108); “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:52). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:25; Monard 1937b:61; Loveridge 1944b:108).

Taxonomic and distributional notes:

Schmidt (1933) suggested that the two Angolan specimens from “Caconda” and “Galanga” identified as *Chamaesaura macrolepis* (Cope, 1862) by Bocage (1895a) are more likely referable to *C. miopropus* Boulenger, 1895. For



MAP 182. Distribution of *Chamaesaura miopropus* in Angola.

some time and until recently, *C. miopropus* was treated as a northern subspecies of *C. macrolepis* (Cope, 1862) (Broadley 1971d; Branch 1998; Spawls et al. 2004). Although this species is distinguished by *C. macrolepis* by the presence of forelimbs (Bocage 1895a, Schmidt 1933; Loveridge 1944b; Broadley 1971a; Broadley and Cotterill 2004) which are absent in the latter taxon. *Chamaesaura miopropis* is geographically isolated, occurring from Angola east to northern Malawi and southern Tanzania, whereas *C. macrolepis* is endemic to South Africa, Zimbabwe and Swaziland (Broadley and Cotterill 2004; Bates et al. 2014). *Chamaesaura miopropus* should therefore be considered a valid species (Broadley and Cotterill 2004; Stanley et al. 2011; Bates et al. 2014).

Genus *Cordylus* Laurenti, 1768

Cordylus angolensis (Bocage, 1895)

ANGOLAN GIRDLED LIZARD (Endemic)

Zonurus angolensis Bocage 1895a:25. Holotype: MBL specimen number unknown (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: "Caconda," Huíla Province, Angola.

Zonurus cordylus: Boulenger (1897:277).

Zonurus angolensis: Monard (1937b:61), Frade (1963:252).

Cordylus cordylus angolensis: Loveridge (1944b:38).

Cordylus tropidosternum tropidosternum: Broadley (1971:22)

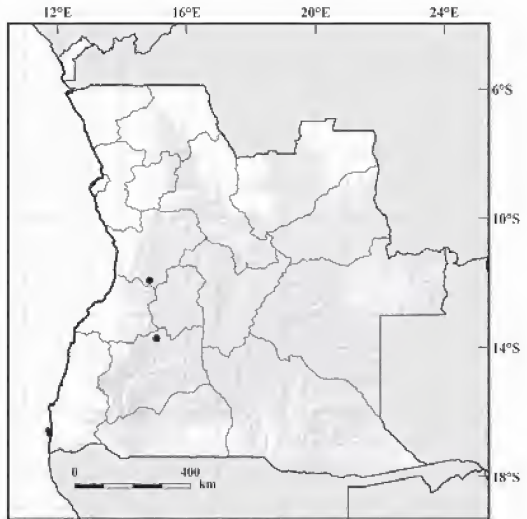
Cordylus angolensis: Broadley and Branch (2002:10), Branch et al. (2005:131), Stanley et al. (2011:67), Greenbaum et al. (2012:36), Nielsen and Colston (2014:167), Stanley et al. (2016:23).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 183): The species is known from the type locality "Caconda" in Huíla Province but its distribution range reaches the southern regions of Kwanza Sul Province. **Kwanza Sul:** "Mombolo" [-11.91667, 14.85000] (Greenbaum et al. 2012:36). **Huíla:** "Caconda" [-13.73333, 15.06667] (Bocage 1895a:24; Monard 1937b:61; Loveridge 1944b:39).

Taxonomic and distributional notes: In the description of *Cordylus angolensis* Bocage (1895a) expressed some doubts about the true identity of *C. angolensis*, leading him to name it in a "provisional manner." The species was not cited in any further Bocage works after the description. With the destruction of the type specimen in the Lisbon museum fire, the taxonomic identity of the species became even more problematic. Broadley (1971b) considered it a synonym of *Cordylus tropidosternum* (Cope, 1869). Loveridge (1944b) and Branch et al. (2005) noted that Bocage's type description of *C. angolensis* lacked detail, although it is now considered a valid species endemic to central Angola (Broadley and Branch 2002; Stanley et al. 2011; Nielsen and Colston 2014; Stanley et al. 2016). Greenbaum et al. (2012) found three *Cordylus* specimens in the collections of the American Museum of Natural History assignable to *C. angolensis* from "Mombolo", approximately 190 km north-northwest of the type locality. These specimens agree with the original holotype description in some measurements and coloration,



MAP 183. Distribution of *Cordylus angolensis* in Angola.

considered it a synonym of *Cordylus tropidosternum* (Cope, 1869). Loveridge (1944b) and Branch et al. (2005) noted that Bocage's type description of *C. angolensis* lacked detail, although it is now considered a valid species endemic to central Angola (Broadley and Branch 2002; Stanley et al. 2011; Nielsen and Colston 2014; Stanley et al. 2016). Greenbaum et al. (2012) found three *Cordylus* specimens in the collections of the American Museum of Natural History assignable to *C. angolensis* from "Mombolo", approximately 190 km north-northwest of the type locality. These specimens agree with the original holotype description in some measurements and coloration,

although they differ in the scale counts of longitudinal rows of ventral scales (Greenbaum et al. 2012). Angolan *Cordylus* are currently being revised and the systematic position of *C. angolensis* will hopefully be resolved. *Cordylus angolensis* was described within the account of *Cordylus cordylus* (Bocage 1895a). The two specimens treated as *C. cordylus* were from the Sociedade de Geografia de Lisboa, Portugal, and had only the locality “Angola.” Monard (1937b) considered these specimens to be attributable to *Cordylus vittifer* (Reichenow, 1887), although Loveridge (1944b) considered this opinion untenable and considered them assignable to *C. angolensis*. The identity of these specimens, which have recently been re-discovered remains uncertain, but is under study.

Cordylus machadoi Laurent, 1964

MACHADO’S GIRDLED LIZARD

Cordylus vittifer machadoi Laurent 1964a:49, fig. 12. Holotype: MD 1840-1 (collector A. Barros Machado).

Type locality: “Leba, Humpata, environs de Sá da Bandeira, Alt. 1800 m, Huíla” [= Serra da Leba, Lubango], Huíla Province, Angola.

Cordylus vittifer machadoi: Broadley (1971b:22)

Cordylus machadoi: Branch (1998:195), Stanley et al. (2011:67), Greenbaum et al. (2012:23), Bates et al. (2014:192), Nielsen and Colston (2014:171), Stanley et al. (2016:202).

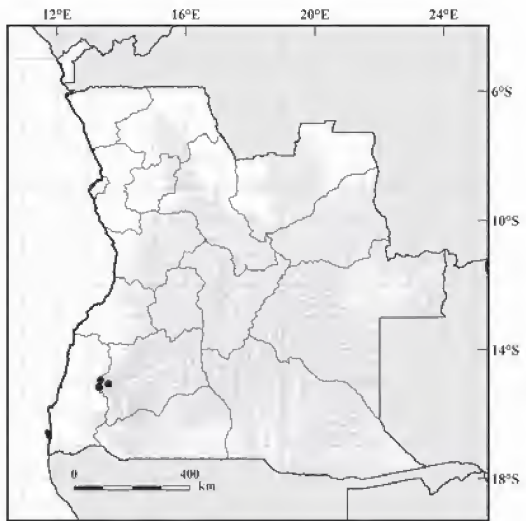
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southwestern Angola and northwestern Namibia.

Occurrences in Angola (Map 184): The species is known from the type locality in Huíla Province, however the species distribution may extend to Namibe Province. **Huíla:** “Leba, Humpata, environs de Sá da Bandeira” [-15.06667, 13.60000] (Laurent 1964a:49); “Humpata” [-14.96167, 13.34972]; [-15.17750, 13.32139E] (Stanley et al. 2011:57; Stanley et al. 2016:209); “Nascente do Tchi-viuguirá” [-15.16667, 13.30000] (Stanley et al. 2016:209).

Taxonomic and distributional notes:

The holotype of this taxon has recently been rediscovered in the collection at Dundo. The single juvenile paratype, was exchanged from this collection and is now MCZ R-74120 (*fide* Stanley et al. 2016). Branch (1998) elevated *C. machadoi* to full species, an action recently supported by recently Stanley et al. (2016) who based their conclusions on two *C. machadoi* specimens collected at the type locality. These were recovered as sister to all East African species of *Cordylus* (Stanley et al. 2011; Greenbaum et al. 2012; Nielsen and Colston 2014). A cryptic species allied to *C. machadoi*, was recently discovered at lower elevation (Stanley et al. 2016). Significant genetic variation across such a constrained geographic area suggests that its northern congener, *C. angolensis* (Bocage, 1895), which has a comparatively broad geographic distribution, may itself represent a species complex (Stanley et al. 2016).



MAP 184. Distribution of *Cordylus machadoi* in Angola.

Cordylus namakuivus* Stanley, Ceriaco, Bandeira, Valério, Bates and Branch, 2016*KAOKOVELD GIRDLED LIZARD (Endemic)**

Cordylus namakuivus (Stanley et al. 2016:212, figs. 1, 4, 5). Holotype: CAS 254912 (collectors L. Stanley, S. de Sá, S. Bandeira, H. Valério, A. Kuhn, J. Vindum and L. Ceriaco). Type locality: “large rock outcrop near Caraculo, road from Lubango and Namibe, Namibe Province,” Angola.

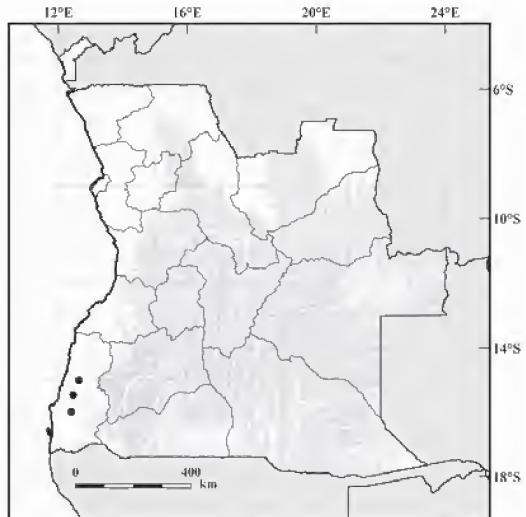
Cordylus namakuivus: Ceriaco et al. (2016a:38, 59).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 185): The species is known from Huíla and Namibe provinces in southwestern Angola. **Huíla:** “large rock outcrop near Caraculo, on the road from Lubango and Namibe” [-15.01650, 12.64203] (Stanley et al. 2016:212; Ceriaco et al. 2016a:38, 59). **Namibe:** “outskirts of Pico Azevedo” [-15.47589, 12.46269] (Stanley et al. 2016:212; Ceriaco et al. 2016a:38, 59); “low rock outcrop bordering the road between Namibe and Omahua lodge” [-15.99681, 12.40683] (Stanley et al. 2016:212; Ceriaco et al. 2016a:38, 59).

Taxonomic and distributional notes: Stanley et al. (2016) recently described this form as a new species endemic to the arid lowlands west of the southern Angolan escarpment and sister to the geographically proximate, high-elevation species *Cordylus machadoi* Laurent, 1964. All phylogenetic analyses recovered the Angolan specimens as monophyletic, forming the earliest diverging lineage of the northern *Cordylus* clade (Stanley et al. 2016). These authors analyzed the morphology of AMNH Angolan specimens identified as *Cordylus cordylus* (Linnaeus, 1758) collected during the Vernay expedition in 1925 and showed that they cluster closely with *C. namakuivus*. Although the Vernay specimens lack specific locality information, the expedition field notes mention that significant numbers of unidentified lizards were collected at “Pico Azevedo” and “100 km east of Moçâmedes,” the same areas where the eight specimens of the *C. namakuivus* were collected, leading the authors to assign the Vernay material to the new species (Stanley et al. 2016).



MAP 185. Distribution of *Cordylus namakuivus* in Angola.

Family Gerrhosauridae Fitzinger, 1843**Genus *Cordylosaurus* Gray, 1865 “1866”*****Cordylosaurus subtessellatus* (Smith 1844)****DWARF PLATED LIZARD**

Gerrhosaurus subtessellatus Smith 1844: pl. 41, fig. 2 and first of two accompanying unnumbered text pages, pl. 42, figs. 17–20. Holotype: BMNH 1946.8.19.41 (collector A. Smith). Type locality: “Great Namaqualand” [= southern Namibia].

Cordylosaurus trivittatus: Boulenger (1887:126), Bocage (1867b:222, 1895a:37).

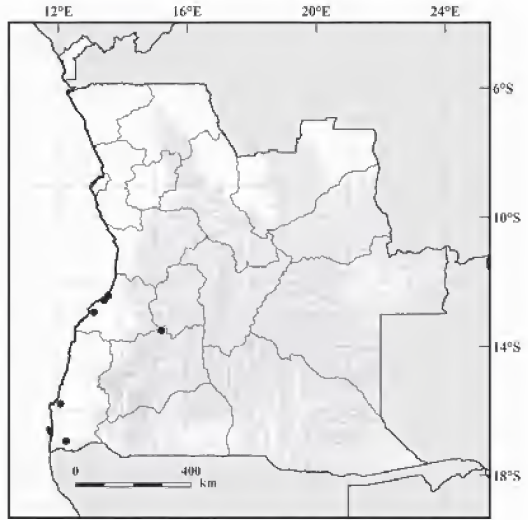
Cordylosaurus subtessellatus: Ceriaco et al. (2016a:39, 59).

Global conservation status (IUCN):

Least Concern.

Global distribution: The species is known from southwestern Angola through western Namibia and into the western parts of South Africa.

Occurrences in Angola (Map 186): The species occurs in the southwestern regions near the coast, but probably also inland (see Notes below). **Benguela:** “Catumbella” [-12.43333, 13.55000] (Bocage 1895a:37); “Benguela” [-12.58333, 13.41667] (Boulenger 1887:126; Bocage 1895a:37); “Dombe” [-12.95000, 13.10000] (Bocage 1867b:222, 1895a:37). **Huíla:** “Rio Cuce” [-13.51667, 15.20000] (Ferreira 1897b:242). **Namibe:** “Rio Coroca” [-15.78333, 12.06667] (Bocage 1895a:37; Cerfaco et al. 2016a:59); “Iona National Park, 20 km SSW of Espinheira” [-16.93169, 12.24500] (Bocage 1895a:37; Cerfaco et al. 2016a:39).



MAP 186. Distribution of *Cordylosaurus subtessellatus* in Angola.

Taxonomic and distributional notes: FitzSimons (1937) recognized a single BMNH specimen (number not given) corresponding to Smith’s description, but the description, although giving details for only a single animal, does note that two specimens were collected by Smith. Ferreira’s (1897b) record of *Holaspis guentheri* Gray, 1863 from “Rio Cuce,” Huíla may actually refer to this unrelated, although superficially similar species.

Genus *Gerrhosaurus* Wiegmann, 1828

Gerrhosaurus auritus Boettger, 1887

KALAHARI PLATED LIZARD

Gerrhosaurus auritus Boettger 1887:148, pl. V, figs. 3a–e. Holotype: SMF 13947 (formerly SMF 6120a) (collector H. Schinz) *vide* Boettger (1893) and Mertens (1922, 1967). Type locality: “Ondonga in Ovamboland” Namibia.

Gerrhosaurus auritus: Monard (1937b:78).

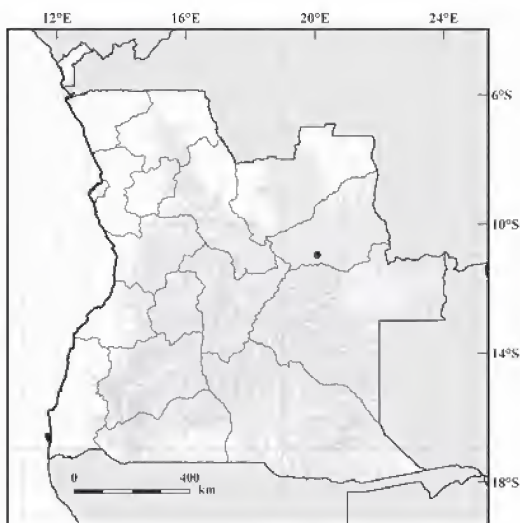
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola, Botswana, the Democratic Republic of Congo and Namibia.

Occurrences in Angola (Map 187): The species occurs in northeastern Angola. **Lunda Sul:** “Lunda” [-10.96667, 20.06667] (Monard 1937b:78)

Taxonomic and distributional notes: Monard considered one specimen from “Lunda” to be possibly referable to *Gerrhosaurus multilineatus* Bocage, 1866, although Loveridge (1942) rejected this interpretation and treated this taxon as a subspecies of *Gerrhosaurus nigrolineatus* Hallows, 1857. Subsequent authors, including FitzSimons (1943), Mertens (1971) and de Witte (1953) have considered *G. auritus* a full species. However, de Witte’s specimens were, in fact, referable to *G. bulsi* Laurent, 1954 (Bates et al. 2013), a species described by Laurent (1954) first as a subspecies of *auritus*. Broadley (1971) treated *auritus* as a subspecies of *G. multilineatus* and this has subsequently been followed by Bates et al. (2014). There has been much confusion regarding the applicability of names in *Gerrhosaurus* due to the lack of fresh material of Angolan

G. multilineatus, the type series of which was destroyed by fire in the Museu Bocage (Broadley 2007). Griffin (2003) reassessed and recognized the nomen *G. auritus* as a valid species (Bates et al. 2014) as did Broadley and Cotterill (2004) and Broadley (2007). According to Bates et al. (2013), *G. auritus* appears to be closely related to *G. nigrolineatus*, but they are morphologically distinguishable (Broadley 2007).



MAP 187. Distribution of *Gerrhosaurus auritus* in Angola.

Gerrhosaurus bulsi Laurent, 1954

LAURENT'S PLATED LIZARD

Gerrhosaurus auritus bulsi Laurent 1954a:64. Holotype: MD Ang. 2127 (collector A. Barros Machado). Type locality: "Dundo," Lunda Norte Province, Angola.

Gerrhosaurus nigrolineatus nigrolineatus: Laurent (1950a:12).

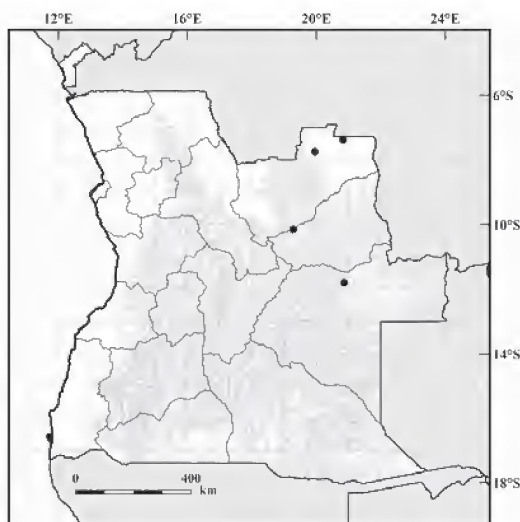
Gerrhosaurus bulsi: Laurent (1964a:50), Branch and Conradie (2015:200).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola, the southern Democratic Republic of Congo, and Zambia.

Occurrences in Angola (Map 188): The species occurs in northeastern and central regions of Angola. **Lunda Norte:** "Dundo" [-7.36667, 20.83333] (Laurent 1950a:12, 1954a:64, 1964a:50); "Luachimo village" [-7.38333, 20.83333] (Bates et al. 2013:469 [Table 1]); "Lake Carumbo base camp" [-7.74422, 19.95522] (Bates et al. 2013:469 [Table 1]); "Carumbo" [-7.74422, 19.95467] (Branch and Conradie 2015:200). **Lunda Sul:** "Poste de Cacolo, Alto Cuílo" [-10.15000, 19.28333] (Laurent 1964a:51). **Moxico:** "environs du lac Calundo" [-11.80000, 20.86667] (Laurent 1964a:50).

Taxonomic and distributional notes: de Witte's (1943) specimens of *G. auritus* Boettger, 1887, are, in fact, referable to this species (Bates et al. 2013). For some time *G. bulsi* was treated as a synonym of the poorly known *Gerrhosaurus multilineatus* Bocage, 1866 (Broadley 1971), although it is currently regarded as valid (Broadley and Cotterill 2004; Broadley



MAP 188. Distribution of *Gerrhosaurus bulsi* in Angola.

2007). According to Bates et al. (2013) *G. bulsi* is a distinct species that is sister to the clade (*Gerrhosaurus intermedius* [*G. auritus*, *G. nigrolineatus*]).

***Gerrhosaurus multilineatus* Bocage, 1866**

KWANZA KEELED PLATED LIZARD (Endemic)

Gerrhosaurus multilineatus Bocage 1866a:44. Holotype: MBL specimen number unknown (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” [= Calandula], Malanje Province, Angola.

Gerrhosaurus multilineatus: Bocage (1866b:61, 1867b:221), Peters (1881:147).

Gerrhosaurus bulsi: Ceriaco et al. (2016b:63).

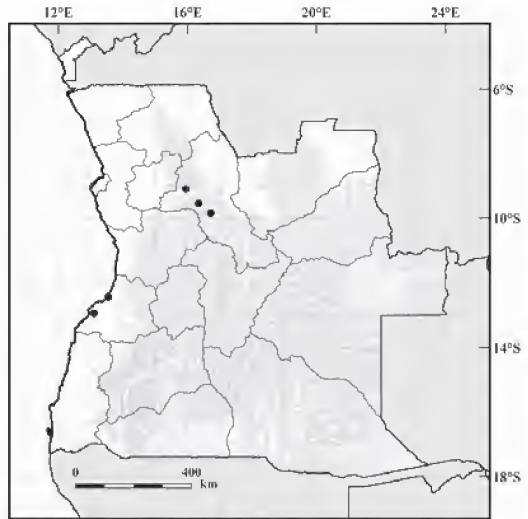
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 189): Published records exist for this species from central and western Angola. **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:44, 1866b:61); “Malanje” [-9.55000, 16.35000] (Peters 1881:147); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:63). **Benguela:** “Catumbella” [-12.43333, 13.55000] (Bocage 1867b:221); “Dombe” [-12.95000, 13.10000] (Bocage 1867b:221).

Taxonomic and distributional notes:

Bocage (1866b) remarked that *Gerrhosaurus multilineatus* might be a well-characterized variety of *G. nigrolineatus* Hallowell, 1857, however he considered the two species distinct based on color pattern. Loveridge (1942) and FitzSimons (1943) subsequently relegated *G. multilineatus* to the synonymy of *G. nigrolineatus*, the former considering it a color variant (Loveridge 1942). Haagner et al. (2000) stated that Broadley (unpublished) considered *G. multilineatus* to be based on a hybrid specimen and that the name would, therefore, be unavailable. However, according to Article 17.2 of the Code (ICZN 1999), even if the specimen was a hybrid, the name would still be available (Bates et al. 2013). Currently this species is recognized as valid despite the obvious taxonomic confusion, the loss of the original type series to fire at the Museu Bocage and the lack of museum material, especially from Angola (Bates et al. 2013). The status of *Gerrhosaurus multilineatus* and the assignment of Angolan populations referred to *Gerrhosaurus nigrolineatus* (e.g., Boulenger 1887, 1905; Ferreira 1900a, 1903, 1904; Angel 1923; Monard 1937b; Mertens 1938a; Hellmich 1957a, 1957b; Manaças 1963; Parker 1936; Schmidt 1933; Laurent 1954a) remains problematic and resolution must await the collection of material from the type locality for molecular analysis, and a detailed morphological evaluation of the complex (Bates et al. 2013). Ceriaco et al. (2016b) referred to the specimen collected in Cangandala National Park (Malanje Province) as *G. bulsi*, but ongoing molecular works reveal that it shall be considered true *multilineatus*.



MAP 189. Distribution of *Gerrhosaurus multilineatus* in Angola.

Gerrhosaurus cf. nigrolineatus* Hallowell, 1857*BLACK-LINED PLATED LIZARD**

Gerrhosaurus nigro-lineatus (Hallowell 1857:49). Syntypes: ANSP 3729, 8825 (collector H.A. Ford). Type locality: “Gaboon” [= Gabon].

Gerrhosaurus nigrolineatus: Bocage (1866a:43; 1870:68, 1887c:210, 1895a:35, 1896a:111), Peters (1877a:613), Boulenger (1887:122, 1905:111), Ferreira (1900a:49, 1903:15, 1904:117), Angel (1923:159), Monard (1937b:78), Laurent (1954a:64), Grillitsch et al. (1996:26), Largen and Parker (2004:16), Ceriaco et al. (2014b:671), Ceriaco et al. (2016a:59).

Gerrhosaurus flavigularis nigrolineatus: Schmidt (1919:523, 1933:11), Mertens (1926:152, 1938a:435), Loveridge (1936a:65), Parker (1936:133).

Gerrhosaurus nigrolineatus ahlefeldti Hellmich and Schmelcher 1956:203, fig. 1. Holotype: ZMH R02563 (formerly ZMH 806) (collector G.A. von Maydell) *fide* Hallermann (1998). Type locality: “Piri- Dembos, Roca Nova Douro” [= Piri-Dembos, Roça Novo Douro, Fazenda Novo Minho], Kwanza Norte Province, Angola.

Gerrhosaurus nigrolineatus nigrolineatus: Hellmich (1957a:54, 1957b:58), Manaças (1963:236).

Gerrhosaurus nigrolineatus ahlefeldti: Hallermann (1998:208), Frazen and Glaw (2007:222), Böhme (2014:152).

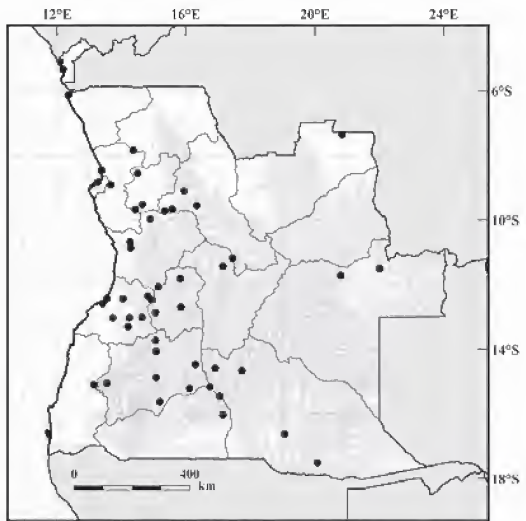
Gerrhosaurus cf. nigrolineatus: Conradie et al. (2016:24).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from a large distribution range, from Gabon and the lower Congo eastwards through southern Democratic Republic of the Congo eastern to Kenya, then southwards as far as northern Namibia, northern Botswana and north-eastern South Africa.

Ocurrences in Angola (Map 190): The species is known from northeastern Angola.

Cabinda: “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:613); “Molembo” [-5.33333, 12.20000] (Bocage 1895a:35); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:43, 1895a:35). **Lunda Norte:** “Dundo près du Musée” [-7.36667, 20.83333] (Laurent 1954a:64). **Zaire:** “St. Antonio [do Congo]” [-6.13333, 12.36667] (Schmidt 1919:523-524). **Bengo:** “Ambriz” [-7.844312, 13.106493] (Boulenger 1887:122; Bocage 1895a:35; Grillitsch et al. 1996:26); “Cabiri” [-8.91667, 13.66667] (Ferreira 1904:117). **Luanda:** “Luanda” [-8.83333, 13.26667] (Largen and Parker 2004:16). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich and Schmelcher 1956:203; Hellmich 1957b:58; Hallermann 1998:208; Frazen and Glaw 2007:222; Böhme 2014:152); “Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:54); “Dondo” [-9.68333, 14.43333] (Bocage 1895a:35). **Kwanza Sul:** “Libolo/Luati” [-9.98333, 14.90000] (Hellmich 1957b:58), “Quirimbo” [-10.68333, 14.26667] (Parker 1936:133); “Congulu” [-10.86667, 14.28333] (Parker 1936:133). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1895a:35; Ferreira 1903:15; Boulenger 1905:111); “Malanje” [-9.55000, 16.35000] (Bocage 1895a:35); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:671); “Pungo-Andongo” [-9.66667, 15.58333] (Boulenger 1905:111). **Moxico:** “Lago Dilolo” [-11.50000, 22.01667] (Manaças 1963:236); “Lago Cameia” [-11.71667, 20.80000] (Manaças 1963:236). **Bié:** “Gauca”



MAP 190. Distribution of *Gerrhosaurus cf. nigrolineatus* in Angola.

[-11.18333, 17.45000] (Schmidt 1933:11); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:11). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:78); “Galanga” [-12.06667, 15.15000] (Bocage 1895a:35; “Santo Amaro” [-12.70000, 15.85000] (Monard 1937b:78); “Cuma” [-12.86667, 15.06667] (Loveridge 1936a:65). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1887c:210); “Catumbella” [-12.43333, 13.55000] (Bocage 1887c:210); “Quissange” [-12.43333, 14.05000] (Bocage 1887c:210, 1895a:35); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:35); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:54); “Cubal” [-13.03333, 14.25000] (Mertens 1938:435); “Benguela” [-12.58333, 13.41667] (Boulenger 1887:122; Bocage 1895a:35); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:111); “Catengue” [-13.03333, 13.73333] (Mertens 1926:152). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:35); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:78); “Kapelongo” [-14.88333, 15.08333] (Monard 1937b:78); “Quillengues” [-14.06667, 15.08333] (Bocage 1895a:35); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:35); “Kampulu” [-15.21667, 16.11667] (Monard 1937b:78); “Mulondo” [-15.63333, 15.20000] (Monard 1937b:78). **Namibe:** “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:35; Ceriaco et al. 2016a:59). **Cunene:** “riv. Mbalé” [-15.16667, 16.75000] (Monard 1937b:78); “Chimporo” [-16.03333, 17.15000] (Monard 1931:109, 1937b:148). **Cuando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1937b:78); “Kwito region, tributary of Kubango” (Angel 1923:159); “Cubango basin (6a)” [-14.67155, 17.73525] (Conradie et al. 2016:8-9, 24); “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:9-10, 24); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9-10, 24); “Cubango basin (46)” [-14.58981, 16.907389] (Conradie et al. 2016:9, 12, 24). **Undetermined locality:** “Carangigo” (Bocage 1895a:35); “Between, Bihé and Quilenges” (Boulenger 1905:111); “without precise location” (Bocage 1870:68; Ferreira 1900:49).

Taxonomic and distributional notes: Bates et al. (2013) suggested that *G. nigrolineatus* was not monophyletic and resurrected *G. intermedius* Lönnberg, 1907 for eastern populations (Kenya, Uganda, Rwanda, Tanzania, Malawi, Mozambique, Zimbabwe and South Africa). However, accurate determination of geographical boundaries for *nigrolineatus* and *intermedius*, especially in Central Africa (Angola, Democratic Republic of Congo, Zambia, northern Botswana and northern Namibia) will require additional sampling, as well as additional morphological analysis of specimens from throughout their extensive ranges. Bates et al. (2013) questioned the assignment of Angolan *Gerrhosaurus multilineatus* Bocage, 1866 specimens to *G. nigrolineatus* (e.g., Boulenger 1887, 1905; Ferreira 1900, 1903, 1904; Angel 1923; Monard 1937b; Mertens 1938; Hellmich 1957a, 1957b; Manaças 1963; Parker 1936; Schmidt 1933; Laurent 1954), and their relationship (see *G. multilineatus* account). The status of the *G. nigrolineatus* complex in Angola is currently under investigation (M. Bates, pers. comm.) and the records plotted here should be considered as only tentatively assigned to this species. *Gerrhosaurus nigrolineatus ahlefeldti* (Hellmich and Schmelcher, 1956) is now considered a synonym of *G. nigrolineatus*, the holotype and four paratypes are present in the Zoological Museum in Hamburg and two paratypes are at the Zoologische Staatssammlung, München (Hallermann 1998; Franzen and Glaw 2007).

Gerrhosaurus skoogi Andersson, 1916

DESERT PLATED LIZARD

Gerrhosaurus skoogi Andersson 1916:10, fig. 2. Holotype: GNM 1387 (donor Lt. D. Fortunato). Type locality: “Port Alexander, Portuguese West Africa” [= Tômbua], Namibe Province, Angola.

Angolosaurus skoogi: Loveridge (1942:495), FitzSimons (1953:215), Branch (1998:177), Ceriaco et al. (2016a:39, 59).

Global conservation status (IUCN): Least Concern.

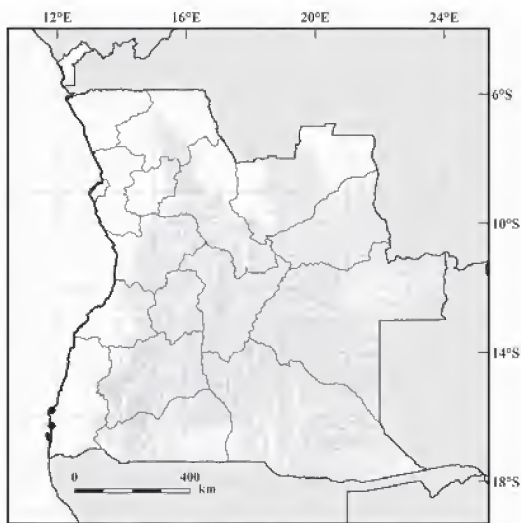
Global distribution: A deserticolous species that may form loosely-structured colonies

restricted to the Namib Desert, in southwestern Angola and northwestern Namibia.

Ocurrences in Angola (Map 191): The species occurs in southwestern Angola and is restricted to the Namib Desert. **Namibe:** “Porto Alexandre, between Mossamedes and the mouth of the Kunene river” [-15.80000, 11.83333] (Andersson 1916; Loveridge 1942:495; FitzSimons 1953:215; Ceriaco et al. 2016a:59); “Praia do Navio coastal dunes, ca 12 km SSW of Namibe” [-16.27233, 11.83164] (Ceriaco et al. 2016a:39).

Taxonomic and distributional notes:

The Genus *Angolosaurus* was established by FitzSimons (1953) to accommodate the species *Gerrhosaurus skoogi* Andersson, 1916. Lang (1991) considered *Angolosaurus skoogi* the probable sister taxon to mainland African gerrhosaurids (Lang et al. 2003) and Nance (2007) supported a position as the most basal member of Gerrhosauridae based on morphology. However, Lamb et al. (2003) showed, using mitochondrial DNA data, that the species is embedded within *Gerrhosaurus* and this was confirmed by a multilocus phylogeny by Lamb and Bauer (2013). Consequently *Angolosaurus* is a synonym of *Gerrhosaurus* (Adolphs and Bates 2010).



MAP 191. Distribution of *Gerrhosaurus skoogi* in Angola.

Genus *Matobosaurus* Bates and Tolley, 2013

Matobosaurus maltzahni (de Grys, 1938)

WESTERN GIANT PLATED LIZARD

Gerrhosaurus Maltzahni de Grys 1938:58, figs. 1–2. Holotype: ZMH 5114 (collector A. von Maltzahn), lost ? (not reported by Hallermann 1998). Type locality: “Farm Roidina, D.S.W.-Afrika” [= Roidina Nature Farm], Namibia.

Gerrhosaurus robustus: Bocage (1870:68, 1887b:203).

Gerrhosaurus validus: Bocage (1895a:36), Boulenger (1905:111), Mertens (1938a:435), Frade (1963:253), Branch (1998:181).

Gerrhosaurus validus maltzahni: Loveridge (1942:497), Hellmich (1957b:58).

Matobosaurus maltzahni: Bates and Tolley (2013:470), Ceriaco et al. (2016b:59).

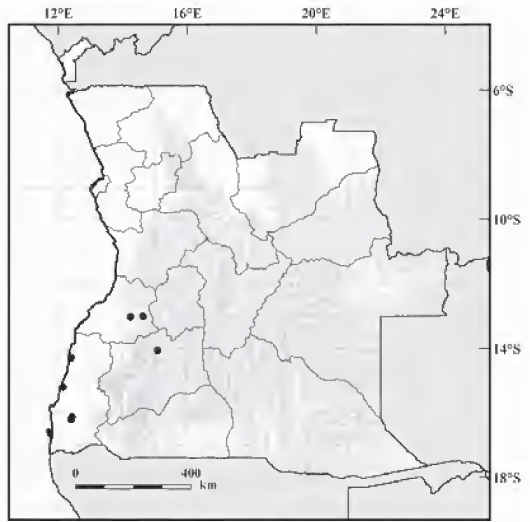
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from central and northwestern regions of Namibia and extends into southern Angola.

Ocurrences in Angola (Map 192): The species occurs in the southwestern Angola. **Benguela:** “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957b:56); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:435; Loveridge 1942:497). **Huíla:** “Quillengues” [-14.06667, 15.08333] (Bocage 1895a:36; Loveridge 1942:497). **Namibe:** “Rio Chimba” [-14.30000, 12.40000] (Bocage 1895a:36; Loveridge 1942:497; Ceriaco et al. 2016a:59); “Mossamedes” [-15.20000, 12.15000] (Bocage 1887b:203, 1895a:36; Ceriaco et al. 2016a:59); “0.5 km S of Tambor, Iona” [-16.13556, 12.42972] (Bates et al. 2013:470; Ceriaco et al. 2016a:59) and “Omuaha Lodge, Iona” [-16.19872, 12.40008] (Bates et al. 2013:470; Ceriaco et al. 2016a:59). **Undetermined locality:** “Between Benguella and Bihé” (Boulenger 1905:111; Loveridge 1942:497); “Mossamedes to Huíla” (Bocage 1895a:36; Loveridge 1942:497).

Taxonomic and distributional notes:

The species was for some time considered a subspecies of *Gerrhosaurus validus* (Smith, 1849). A combination of molecular, morphological and geographical evidence, suggests that the two taxa represent separate evolutionary lineages (Bates et al. 2013) that occur in allopatry, with *validus* distributed in southeastern Africa and *maltzahni* restricted to northern Namibia and southern Angola (Bates et al. 2013; Bates et al. 2014). Thus records of *Gerrhosaurus validus* (or *Gerrhosaurus robustus* Peters, 1854) from Angola (Bocage 1870, 1887b, 1895a; Boulenger 1905; Mertens 1938a; Frade 1963) are, in fact, referable to *maltzahni*. A new genus, *Matobosaurus* was erected by Bates and Tolley (2013) to incorporate this distinctive clade of gerrhosaurids (Bates et al. 2013).



MAP 192. Distribution of *Matobosaurus maltzahni* in Angola.

Genus *Tetradactylus* Merrem, 1820***Tetradactylus ellenbergeri* (Angel, 1922)****ELLENBERGER'S PLATED SNAKE-LIZARD**

Paratetradactylus Ellenbergeri (Angel 1922:151). Holotype: MNHN 1921-514 (donated by V. Ellenberger).

Type locality: "Pays des Barotsés (Rhodesie)" [= Barotseland] Zambia.

Tetradactylus lundensis (Monard 1937b:79). Syntypes: MHNC 91.0455-58 [4 specimens] (collector A. Monard). Type locality: "Lunda, sur les bords du Tyihumbwé" [= Lunda, on the edges of Tyihumbué river] Lunda Sul Province, Angola.

Caitia africana: Bocage (1895a:37).

Tetradactylus lundensis (Monard 1937b:79).

Tetradactylus boulengeri lundensis: de Witte and Laurent (1942b:105).

Tetradactylus ellenbergeri ellenbergi: Laurent (1964a:55).

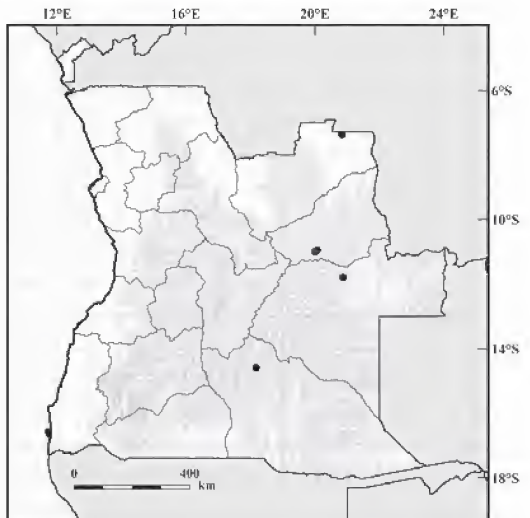
Tetradactylus ellenbergeri boulengeri: Laurent (1964a:55).

Tetradactylus ellenbergeri: Broadley and Cotterill (2004:43), Wagner et al. (2012:35), Conradie et al. (2016:24).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola, Democratic Republic of Congo, Tanzania and Zambia.

Occurrences in Angola (Map 193): The species occurs in northeastern Angola. **Lunda Norte:** "Dundo" [-7.36667, 20.83333] (Laurent 1964a:55). **Lunda Sul:** "Lunda" [-10.96667, 20.06667] (de Witte and Laurent



MAP 193. Distribution of *Tetradactylus ellenbergeri* in Angola.

1942b:105; Wagner et al. 2012:37); “Lunda, sur les bords du Tyihumbwé” [-11.00000, 20.00000] (Monard 1937b:79); “Lunda” [-10.96667, 20.06667] (de Witte and Laurent 1942b:105; Wagner et al. 2012:37). **Mexico:** “environs du lac Calundo (Chef Sá-Mussamba Village) 105 km east of Luso” [-11.80000, 20.86667] (Laurent 1964a:55). **Cuando Cubango:** “along a dammed section of the Luassingua River (23)” [-14.58972, 18.17083] (Conradie et al. 2016:24). **Undetermined location:** “sur les bords du Cuando” (Bocage 1895a:37; Monard 1937b).

Taxonomic and distributional notes: Bocage (1895a) cited Angolan material of *Catia africana*, currently *Tetradactylus africanus* (Gray, 1838), a species now regarded as restricted to coastal regions of KwaZulu-Natal, South Africa and adjacent southern Mozambique (Bates et al. 2014). It is likely that Bocage’s record is referable to *T. ellenbergeri* (Angel, 1922). Monard (1936b) described *T. lundensis* from Angola, although Laurent (1964a) treated it as a synonym of *T. ellenbergeri boulengeri* (de Witte, 1933). Wagner et al. (2012) noted only the “Lunda” record from Angola, but other historical records exist (see above).

Family Scincidae Gray, 1825

Genus *Acontias* Cuvier, 1816 “1817”

Acontias jappi (Broadley, 1968)

BAROTSELAND BLIND LEGLESS SKINK

Typhlosaurus lineatus jappi Broadley 1968a:13. Holotype: NMZB 6757 (formerly UM 6757) (collector R.G. Japp). Type locality: “Kalabo, Barotseland, Zambia”.

Typhlosaurus jappi: Schneider and Bauer (2009:56).

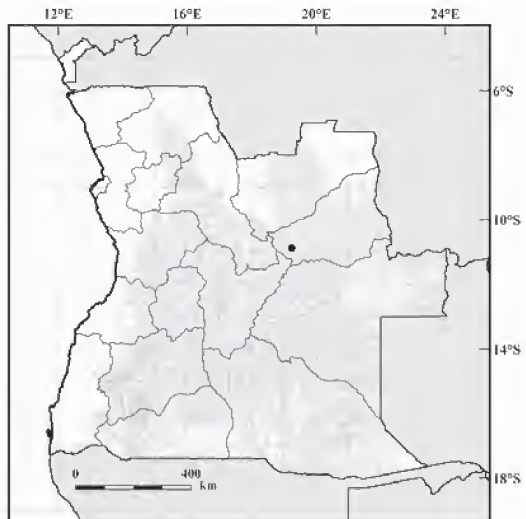
Acontias jappi: Lamb et al. (2010:42), Wagner et al. (2012:294).

Global conservation status (IUCN): Not Evaluated

Global distribution: The species occurs from western Zambia to eastern Angola, west of the Zambezi River.

Occurrences in Angola (Map 194): The species occurs in Moxico Province, southeastern Angola. **Mexico:** “Gago Coutinho district” [-10.88333, 19.23333] (Broadley 1968a:13; Schneider and Bauer 2009:56).

Taxonomic and distributional notes: Schneider and Bauer (2009) recognized *A. jappi* as a full species, and were followed by Lamb et al. (2010) and Wagner et al. (2012), although molecular data are required to confirm its specific status.



MAP 194. Distribution of *Acontias jappi* in Angola.

Acontias kgalagadi Lamb, Biswas and Bauer, 2010

KALAHARI LEGLESS SKINK

Typhlosaurus lineatus Boulenger 1887:432, pl. XXVIII, fig. 3. Holotype: BMNH 69.2.4.1 (presented by South African Museum). Type locality: “Cape of Good Hope,” South Africa.

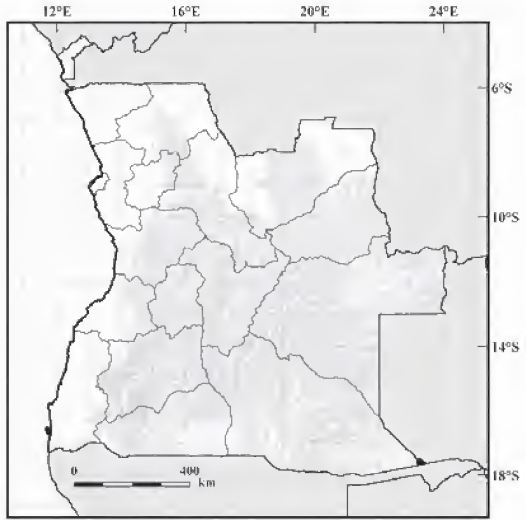
Acontias kgalagadi kgalagadi: Conradie et al. (2016:25).

Global conservation status (IUCN): Not Evaluated

Global distribution: The species is known from northern Namibia and Botswana and adjacent southeastern Angola.

Occurrences in Angola (Map 195): Cuando Cubango: “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9, 25).

Taxonomic and distributional notes: Conradie et al. (2016) collected a single individual from this species from Cuando Cubango constituting the first record in Angola and the first record north of the Okavango River. Lamb et al. (2010) provided a replacement name, *Acontias kgalagadi*, for *Typhlosaurus lineatus*, which they placed in *Acontias* based on a molecular phylogenetic analysis. Boulenger’s name was preoccupied by *Acontias lineatus* Peters, 1879, a species occurring in western South Africa and southern Namibia.



MAP 195. Distribution of *Acontias kgalagadi* in Angola.

***Acontias occidentalis* FitzSimons, 1941**

SAVANNA LEGLESS SKINK

Acontias plumbeus occidentalis FitzSimons 1941:275. Lectotype: PEM R5105 (formerly AM 6064) designated by Mertens (1955:74). Type locality: Explicitly restricted to “Okahandja, Damaraland, Südwestafrika [Namibia]” by Mertens (1955).

Acontias plumbeus: Monard (1937b:96).

Acontias percivali occidentalis: Broadley (1969:20), Branch (1998:135), Daniels et al. (2005:646), Daniels et al. (2006:354).

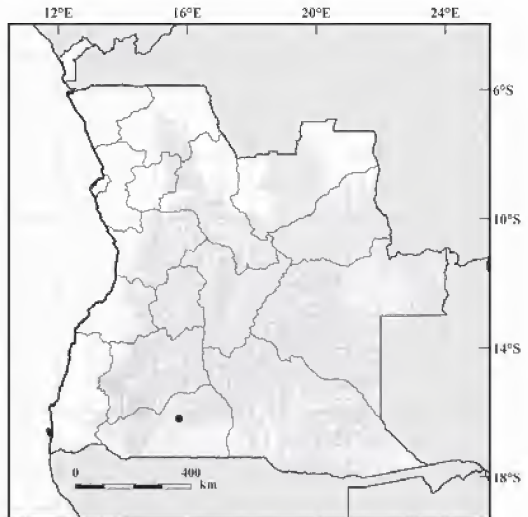
Acontias occidentalis: Lamb et al. (2010:36), Bates et al. (2014:247).

Global conservation status (IUCN): Least Concern.

Global distribution: This species is endemic to southern Africa and adjacent areas in southern Angola (Branch 1998; Daniel et al. 2005; Bates et al. 2014).

Occurrences in Angola (196): The species occurs in Cunene Province near the Namibian border. **Cunene:** “Mupa” [-16.18333, 15.75000] (Monard 1937b:96; Broadley 1969:20).

Taxonomic and distributional notes: The original type series included 10 specimens from across the species range, including northern Namibia, Botswana, and parts of the former Transvaal Province of South Africa. Monard (1937b) misidentified a specimen from “Mupa” southern Angola as *Acontias plumbeus* Bianconi, 1849, a species endemic to southern Africa (Zimbabwe, Mozambique, Swaziland) (Bates et al. 2014). We recently located this individual in the Musée d’Histoire Naturelle, La-Chaux-de-Fond, Switzerland and identified



MAP 196. Distribution of *Acontias occidentalis* in Angola.

it as *A. occidentalis* FitzSimons, 1941. *Acontias occidentalis* was previously considered a subspecies of *A. percivali* Loveridge, 1935. Based on molecular phylogenetic studies the two are closely related (Daniels et al. 2006), but considered specifically distinct (Lamb et al. 2010).

Genus *Eumecia* Bocage, 1870

Eumecia anchietae anchietae Bocage, 1870

WESTERN SERPENTIFORM SKINK

Eumecia Anchietae Bocage 1870:66, pl. 1. Holotype: MBL specimen number unknown (collector J.A. d'Anchieta) destroyed by fire 18 March 1978. Type locality: "le plateau de la Huilla dans l'intérieur de Mossamedes" [= Huíla plateau] Huíla Province, Angola.

Lygosoma anchietae: Boulenger (1887:316), Themido (1941:8), Frade (1963:252).

Lygosoma (Eumecia) Anchietae: Bocage (1895a:50, 1897a:196).

Riopa (Eumecia) anchietae: Smith (1937:230).

Eumecia anchieta: Mittleman (1952:10).

Riopa anchietae: Hellmich (1957b:58), Loveridge (1957:216).

Eumecia anchietae: Greer (1967:1), Broadley (1965c:16), Spawls et al. (2004:147), Ceriaco et al. (2016a:56).

Global conservation status (IUCN): Not Evaluated.

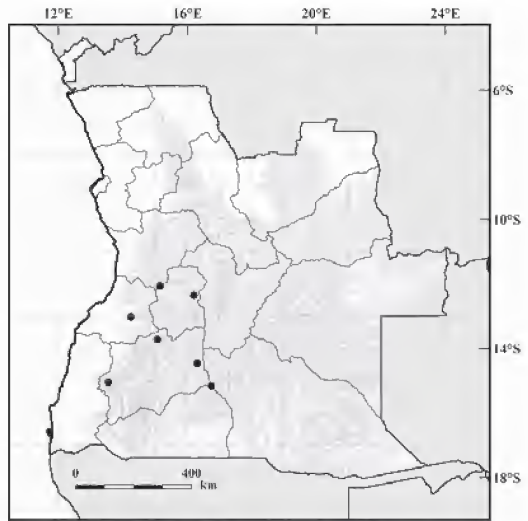
Global distribution: The species is known from Angola, Democratic Republic of Congo, Kenya, Tanzania and Zambia.

Occurrences in Angola (Map 197): The species occurs mainly in central-southwest Angola. **Huambo:** "Galanga" [-12.06667, 15.15000] (Bocage 1895a:50); "Bela-Vista" [-12.36667, 16.20000] (Hellmich 1957b:58). **Benguela:** "Alto Cubal" [-13.03333, 14.25000] (Hellmich 1957b:58). **Huíla:** "Caconda" [-13.73333, 15.06667] (Bocage 1895a:50; Themido 1941:8); "Huíla" [-15.05000, 13.55000] (Bocage 1870:66, 1895a:50, 1897a:196; Boulenger 1887:316; Loveridge 1957:216; Ceriaco et al. 2016a:56); "Kuvangu" [-14.46667, 16.30000] (Monard 1937b:95). **Cunene:** "Riv. Mbalé" [-15.16667, 16.75000] (Monard 1937b:95).

Taxonomic and distributional notes:

Bocage (1870) described the genus *Eumecia* to emphasize similarity between this species and

Eumeces. However, Boulenger (1887) transferred *E. anchietae* to *Lygosoma* (Gray, 1828) where it remained until Smith (1937) revived *Eumecia* for a subgenus of *Riopa*. Mittleman (1952) gave it a full generic rank in his classification, as recognized by Greer (1967) and subsequent authors, although Loveridge (1957) continued to use *Lygosoma*. Metallinou et al. (2016) demonstrated that *Eumecia*, which shows extreme matrotrophy, is sister to *Lubuya ivensii*, the only other African mabuyine skink to exhibit such a high prenatal maternal investment.



MAP 197. Distribution of *Eumecia anchietae anchietae* in Angola.

Eumecia anchietae major Laurent, 1964 LUNDA WESTERN SERPENTIFORM SKINK (Endemic)

Eumecia anchietae major Laurent 1964a:80. Holotype: MD 6002 (collector A. Serralheiro). Type locality: "Calonda, steppe, Lunda," Lunda Norte Province, Angola.

Lygosoma anchietae: Monard (1937b:95).

Global conservation status (IUCN): Not Evaluated.

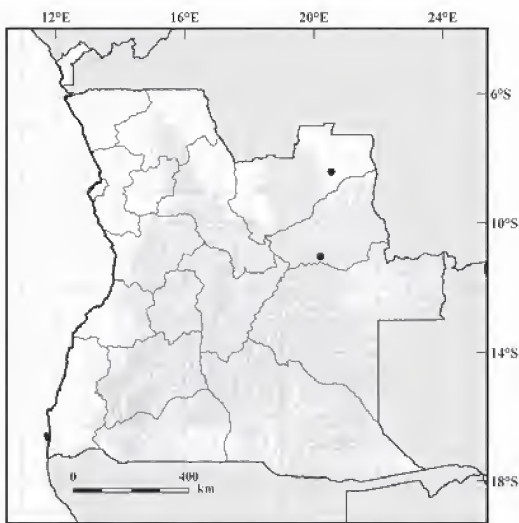
Global distribution: Only known from Angola.

Occurrences in Angola (Map 198):

Lunda Norte: “Calonda” [-8.41667, 20.53333] (Laurent 1964a:80). **Lunda Sul:** “Lunda, near Dala” [-11.03333, 20.20000] (Monard 1937b:95).

Taxonomic and distributional notes:

Monard (1937b) first noted that a specimen from Lunda Norte Province was larger and differed in some features from the more typical southern forms. Laurent (1964a) subsequently described *Eumecia anchietae major* for these northern specimens. The validity of the named subspecies of *Eumecia anchietae* has not been rigorously assessed.



MAP 198. Distribution of *Eumecia anchietae major* in Angola.

Genus *Feylinia* Gray, 1845

Feylinia currori Gray, 1845

WESTERN FOREST FEYLINIA

Feylinia Currori Gray 1845:129: Lectotype, BMNH 1946.8.13.79 (formerly BMNH xv.2.a) (collector J. Curror) designated by Brygoo and Roux-Estève (1983). Type locality: “Angola.” The paralectotype from “Coast of Africa” is referable to *F. polylepis* (see Brygoo and Roux-Estève 1983).

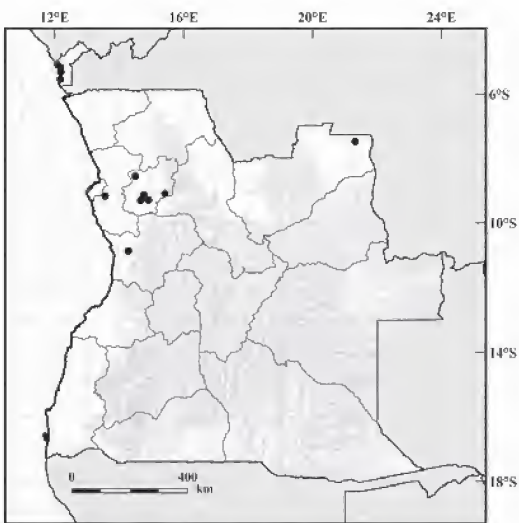
Feylinia Currori: Bocage (1873b:214; 1887a:179, 1895a:57), Peters (1877a:614), Boulenger (1905:111).

Feylinia currori: Boulenger (1887:431), Ferreira (1904:116), Parker (1936:139), Hellmich (1957b:59), Laurent (1964a:84), Brygoo and Roux-Estève (1983:312), Spawls et al. (2004:159), Wagner and Schmitz (2006:183), Chirio and LeBreton (2007:232).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The most widespread species of *Feylinia* occurring from Cameroon to Central African Republic and the Democratic Republic of Congo, east to Tanzania and south to Angola, with two isolated records from Sierra Leone (questionable) and Nigeria.

Occurrences in Angola (Map 199): The species occurs in the northern regions of the country including the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877:614); “Molembo” [-5.33333, 12.20000] (Bocage 1895a:57); “Cabinda” [-5.55000, 12.18333] (Bocage 1887a:179, 1895a:57); “Chiloango” [-5.18333, 12.18333] (Brygoo and Roux-Estève 1983:312; Wagner and Schmitz 2006:184). **Lunda Norte:** “Cassan-



MAP 199. Distribution of *Feylinia currori* in Angola.

guidi” [-7.48333, 21.31667] (Laurent 1964a:84). **Bengo**: “Bom Jesus (Quanza)” [-9.16667, 13.56667] (Ferreira 1904:116). **Kwanza Norte**: “Roca Novo Duro, Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:59; Brygoo and Roux-Estève 1983:312; Wagner and Schmitz 2006:184); “Catari” [-9.09548, 15.41905] (Ferreira 1904:116); “Golungo Alto” [-9.13333, 14.76667] (Ferreira 1904:116; Brygoo and Roux-Estève 1983:312; Wagner and Schmitz 2006:184); “N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1904:116); “Zembe” [-9.31667, 14.66667] (Ferreira 1904:116). **Kwanza Sul**: “Congulu” [-10.86667, 14.28333] (Parker 1936:139; Brygoo and Roux-Estève 1983:312; Wagner and Schmitz 2006:184). **Undetermined locality**: “Mayumba” (Bocage 1887a:179); “Schinga” (Brygoo and Roux-Estève 1983:312).

Taxonomic and distributional notes: Boulenger (1887) mistakenly cited both syntype specimens from “Angola.” Brygoo and Roux-Estève (1983) reviewed the history of the types and provided a point locality map for the species’ global range.

Feylinia elegans (Hallowell, 1852)

ELEGANT FEYLINIA

Acontias elegans Hallowell 1852a:64, fig. p. 64. Type: ANSP 9456, 9667 [2 specimens] (collector H.A. Ford). Type locality: “Liberia, West Coast of Africa” (Hallowell 1852a:65) [“probably in error for Gabon” Loveridge (1957)].

Anelytrops elegans: Bocage (1866b:214, 1867c:227, 1870:57).

Feylinia Currori: Bocage (1873b:214).

Feylinia currori: Boulenger (1887:431).

Feylinia elegans: Schmidt (1919:605), de Witte and Laurent (1942b:108, 1943:36), Brygoo and Roux-Estève (1983:317), Chirio and LeBreton (2007:234).

Feylinia currori elegans: Loveridge (1933:328, 1957:223).

Global conservation status (IUCN): Not Evaluated.

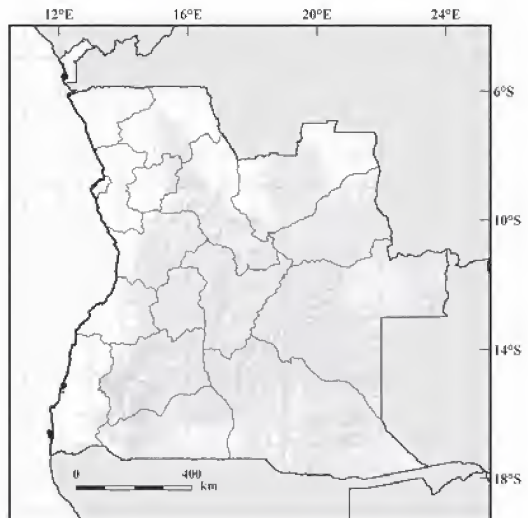
Global distribution: Is a typical Central African forest species, occurring in savannas with western affinities, from Gabon, through Central African Republic, Democratic Republic of Congo to northern Angola.

Occurrences in Angola (Map 200): The species is known from some restricted areas in the north of the country (e.g., extreme north of Zaire Province; northwestern regions of Lunda Norte Province) including the Cabinda enclave.

Cabinda: “Cabinda” [-5.55000, 12.18333] (Bocage 1866b:214). **Namibe:** “Mossamedes” [-15.20000, 12.15000] (Bocage 1867c:227) [in error].

Taxonomic and distributional notes:

Feylinia elegans was originally described by Hallowell (1852a) as *Acontias elegans* with its holotype from “Liberia,” and then redescribed as *Sphenorhina elegans* (Hallowell, 1857) based on two specimens from “Gaboön.” Schmidt (1919) subsequently identified ANSP 9456 as the holotype and Loveridge (1957) explained the discrepancy in locality, which applies to other taxa collected by Ford and reported upon by Hallowell. The species was tentatively referred to the synonymy of *Feylinia currori* Gray, 1845 by several early workers (e.g., Bocage 1873b; Boulenger 1887), although Schmidt (1919) recognized *F. elegans* as specifically distinct.



MAP 200. Distribution of *Feylinia elegans* in Angola.

Loveridge (1933, 1957) considered it as a subspecies of *currori*, whereas de Witte and Laurent (1942b, 1943), considered a full species, as did Brygoo and Roux-Estève (1983). The distribution of *F. elegans* in Angola is probably limited to Cabinda region, and some isolated parts of the Congolian Forest-Savanna in northern regions of the country. The “Mossamedes” record in the extreme southwestern region of the country cited by Bocage (1867c) surely represents a misidentification or incorrect locality.

***Feylinia grandisquamis* Müller, 1910**

LARGE-SCALED FEYLINIA

Feylinia Currori Gray 1845:129. Lectotype, BMNH 1946.8.13.79 (collector J. Curror) designated by Brygoo and Roux-Estève (1983). Type locality: “Angola.”

Feylinia currori grandisquamis Müller 1910:591. Syntypes, ZSM 413/1909 [5 specimens], probably lost *fide* Brygoo and Roux-Estève (1983). Type locality: “Dibongo bei Edea” Cameroon.

Feylinia currori grandisquamis: Schmidt (1919:607).

Feylinia elegans grandisquamis: de Witte and Laurent (1942b:108), Laurent (1964a:84).

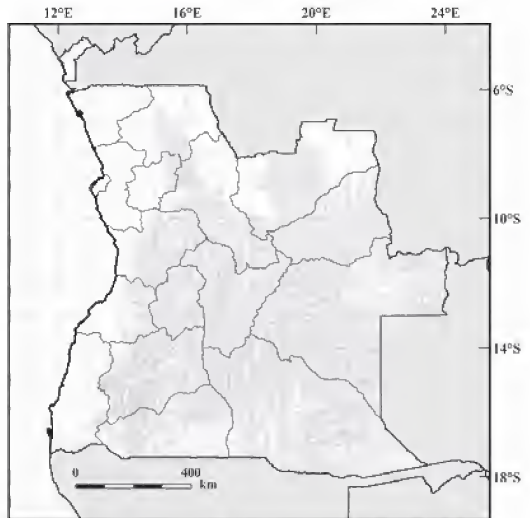
Feylinia grandisquamis: Brygoo and Roux-Estève (1983:330), Chirio and LeBreton (2007:236).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from lowland areas in dense forests, extending from Cameroon to northern Angola and Central Africa.

Ocurrences in Angola (Map 201): The species occurs in the north of the country. **Zaire:** “Cabra, Kakongo” [-6.7500, 12.6500] (Brygoo and Roux-Estève 1983:331). **Undetermined Locality:** “Cuango” (Laurent 1964a:84) (Malanje Province, impossible to georeferenced. See History Section for more detailed information).

Taxonomic and distributional notes: Brygoo and Roux-Estève (1983) plotted the locality “Cabra, Kakongo” in Zaire Province, however Kakongo could also refer to the river of the same name (or related places) in Cabinda. We are unaware of any definitive information that would confirm which locality was intended, but here follow Brygoo and Roux-Estève (1983).



MAP 201. Distribution of *Feylinia grandisquamis* in Angola.

Genus *Lepidothyris* Cope, 1892

***Lepidothyris hinkeli joei* Wagner, Böhme, Pauwels and Schmitz, 2009**

JOE’S RED-FLANKED SKINK

Lepidothyris hinkeli Wagner et al. 2009:12. Holotype: ZFMK 55701 (collector Pâcome and H. Hinkel). Type locality: “Cyamudongo, Nyungwe, Rwanda.”

Lepidothyris hinkeli joei Wagner et al. 2009:14, figs. 8–9. Holotype: ZFMK 64410 (collector E. Fischer and H. Hinkel). Type locality: “Oyo, Bokouélé, Peoples Rep. Congo.”

Mochlus fernandi: Laurent (1964a:78).

Lygosoma fernandi: Chirio and LeBreton (2007:266).

Global conservation status (IUCN): Not Evaluated.

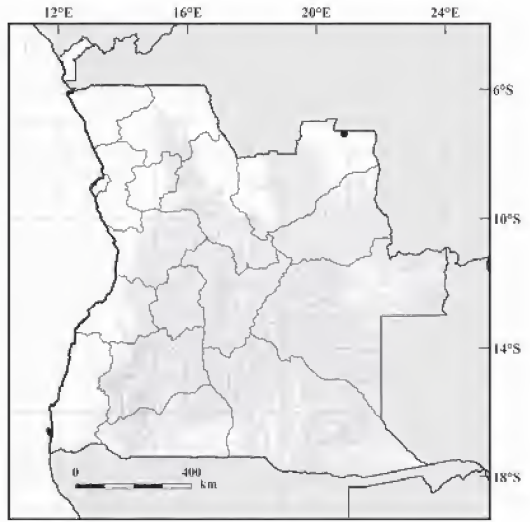
Global distribution: *Lepidothyris hinkeli joei* is a lowland and submontane forest form, rang-

ing around the edges of the Congo Basin in the Democratic Republic of Congo, People's Republic of Congo and far northeastern Angola.

Occurrences in Angola (Map 202): The species is only known from “Dundo”, Lunda Norte Province. **Lunda Norte:** “Dundo, forêt de la Luachimo” [-7.38333, 20.85000] (Laurent 1964a:78).

Taxonomic and distributional notes:

The specific epithet *fernandi* (Burton, 1836) has alternately been associated with several different genera: *Lygosoma* Hardwicke and Gray, 1827, *Lepidothyris* Cope, 1892, *Riopa* Gray, 1839 and *Mochlus* Günther, 1864 (Wagner et al. 2009). Laurent (1964a) signaled the first and only record from Angola. Wagner et al. (2009) resurrected *Lepidothyris* Cope, 1892 for the *fernandi* group. They also provided a morphological and genetic analysis in the *L. fernandi* complex, resulting in the description of new taxa (Wagner et al. 2009), including a new subspecies, *Lepidothyris hinkeli joi* Wagner, Böhme, Pauwels and Schmitz, 2009 to accommodate the Angolan specimen cited by Laurent (1964a), which we recently examined in the Museu Dundo, and additional material from the Democratic Republic of Congo and People's Republic of Congo.



MAP 202. Distribution of *Lepidothyris hinkeli joi* in Angola.

Genus *Leptosiaphos* Schmidt, 1943

***Leptosiaphos dewittei* (Loveridge, 1934)**

DE WITTE'S FIVE-TOED SKINK

Lygosoma (*Siaphos*) *compressicauda* de Witte 1933:175, figs. 1–4. Holotype: MRAC 8614 (collector F.G. Overlaet). Type locality: “Sandoa” [Lualaba Province, Democratic Republic of Congo].

Lygosoma dewittei: Parker (1936:139).

Leptosiaphos dewittei: Broadley (1989c:445), Broadley and Cotterill (2004:42).

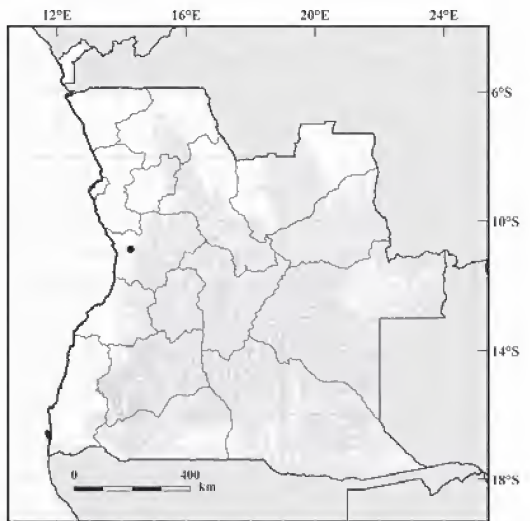
Global conservation status (IUCN): Not Evaluated.

Global distribution: This skink ranges from western Angola to the Upemba National Park, Democratic Republic of Congo where it is most common in the plateau areas.

Occurrences in Angola (Map 203): The species is only known from northeastern Angola. **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:139).

Taxonomic and distributional notes:

The name *Siaphos dewittei* Loveridge, 1934 is a replacement name for *Lygosoma* (*Siaphos*) *compressicauda* de Witte, 1933, itself a junior



MAP 203. Distribution of *Leptosiaphos dewittei* in Angola.

homonym of *Lygosoma* (*Hinulia*) *compressicauda* Werner, 1897. The disjunct localities for this taxon suggest that further taxonomic work is required.

Genus *Lubuya* Horton, 1972

Lubuya ivensii (Bocage, 1879)

IVENS' SKINK

Euprepes Ivensi Bocage 1879a:97. Syntypes: MBL (3 specimens) numbers not known (collectors H. Capello and R. Ivens), destroyed by fire 18 March 1978. Type locality: "Bihé, dans l'intérieur de Benguella" [= Bié], Bié Province, Angola.

Mabuya ivensi septemlineata (Laurent 1964a:77, fig. 23). Holotype: MD 5427 (collector A. Barros Machado). Type locality: "Alto Chicapa, Lunda" [Lunda Sul Province, Angola].

Euprepes Ivensi: Bocage (1879b:95).

Mabuia ivensii: Boulenger (1887:197).

Lygosoma Ivensii: Bocage (1895a:48, 1897a:196).

Mabuya ivensii: Monard (1937b:86), Manaças (1963:233), Branch and Haagner (1993).

Lubuya ivensii: Horton (1972:17), Metallinou et al. (2016:4).

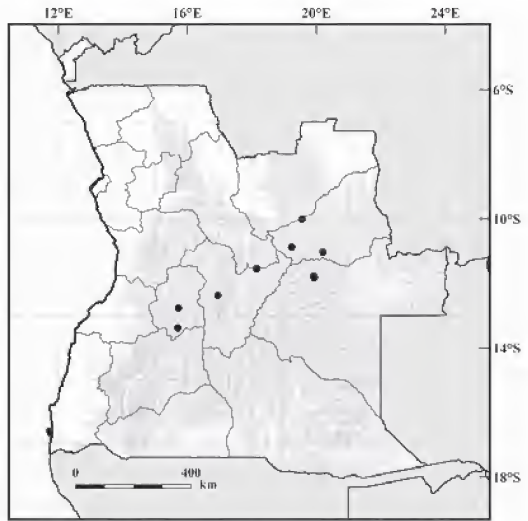
Trachylepis ivensii: Wagner et al. (2012:39).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widely distributed through the drainage systems of Angola, extending into the adjacent regions of the southern Democratic Republic of Congo and Zambia.

Ocurrences in Angola (Map 204): The species is known from central-east Angola.

Lunda Sul: "Alto Cuílo" [-10.01667, 19.55000] (Laurent 1964a:77; Branch and Haagner 1993:112; Wagner et al. 2012:37); "Alto Chicapa" [-10.88333, 19.23333] (Laurent 1964a:77; Branch and Haagner 1993:112; Wagner et al. 2012:37); "Dala" [-11.03333, 20.20000] (Monard 1937b:86; Laurent 1964a:78; Branch and Haagner 1993:112; Wagner et al. 2012:37). **Malanje:** "Rio Loando" (R. Luando, près de Mongoa; Luando River, tributary of the Cuanza River, near Mongoa) [-11.55000, 18.15000] (Bocage 1879b:95; Laurent 1964a:78; Branch and Haagner 1993:112; Wagner et al. 2012:37); "entre Malanje et Pungo Andongo" (Laurent 1964a:78). **Moxico:** "source of the Calombe River (Luso)" [-11.83333, 19.93333] (Manaças 1963:233; Horton 1972:17); "Luso (= Luena)" [-11.78333, 19.91667] (Horton 1972:17; Branch and Haagner 1993:112; Wagner et al. 2012:37). **Bié:** "Bihé, dans l'intérieur de Benguella" [-12.38333, 16.95000] (Bocage 1879a:97); "Benguella" ("Bihé" according to the original publication *fide* Bocage 1879a:97) [-12.38333, 16.95000] (Boulenger 1887:197; Horton 1972:17). **Huambo:** "Huambo" [-12.76667, 15.73333] (Horton 1972:17; Branch and Haagner 1993:109, 112; Wagner et al. 2012:37); "R. Cuando River, affluent du Cunene" [-13.38333, 15.71667] (Laurent 1964a:78; Branch and Haagner 1993:112; Wagner et al. 2012:37). **Undetermined locality:** "Quando" (Bocage 1895a:48, 1897a:196; Branch and Haagner 1993:112); "sur les bords du Quanza et du Quando (margens do Quanza e do Quando)" (Bocage 1895a:49, 1897a:196); "R. Cuanza" (Laurent 1964a:78; Branch and Haagner 1993:112; Wagner et al. 2012:37).



MAP 204. Distribution of *Lubuya ivensii* in Angola.

Taxonomic and distributional notes: Boulenger (1887) incorrectly restricted Bocage's type locality to "Benguela," an action later accepted by Horton (1972), Branch and Haagner (1993), and Wagner et al. (2012). The species was described in *Euprepes* but later moved by Bocage (1895a) to *Lygosoma*. Horton (1972) described the monotypic genus *Lubuya* to accommodate *M. ivenzii*, differentiating it from *Mabuya* as then construed. Greer (1977) suggested that *Lubuya* should return to *Mabuya*, or by implication to *Trachylepis*, the name subsequently allocated to African mabuyine skinks (Bauer 2003). However, Metallinou et al. (2016) resurrected *Lubuya* to accommodate *T. ivenzii*, which they found to be the distantly related sister to *Eumecia*. Monard (1937b) was the first to recognize that specimens from northeastern Angola had an extra white line on the lower flank and Laurent (1964a) subsequently erected *Mabuya ivenzi septemlineata* to recognize this form; its validity has not been critically assessed.

Genus *Melanoseps* Boulenger, 1897

Melanoseps occidentalis (Peters, 1877)

WESTERN LIMBLESS SKINK

Herpetosaura occidentalis Peters 1877b:416. Holotype: ZMB 9122. Type locality: Cameruns [= Cameroon].

Melanoseps occidentalis (Peters): Laurent (1964a:81).

Melanoseps occidentalis zairensis: Brygoo and Roux-Estève (1981:1179).

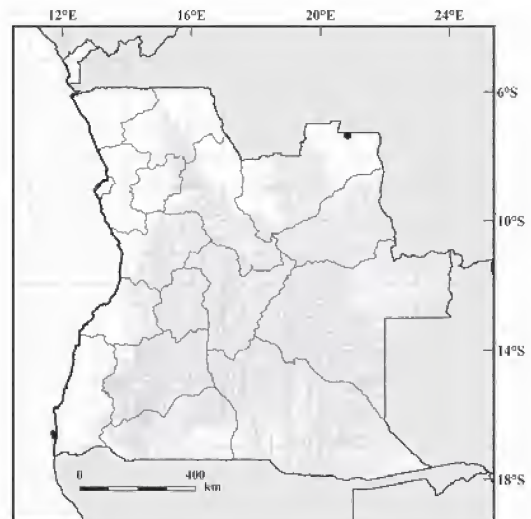
Melanoseps occidentalis: Chirio and Ineich (2006:38), Chirio and LeBreton (2007:270), Trape et al. (2012:368).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is limited to Central Africa, from Gabon to Angola.

Occurrences in Angola (Map 205): The species is only known from "Camaconde, Dundo" in Lunda Norte Province. **Lunda Norte:** "galerie forestière de la rivière Camaconde (affl. gauche de la Luachimo, Dundo)" [-7.36667, 20.83333] (Laurent 1964a:81; Brygoo and Roux-Estève 1981:1171).

Taxonomic and distributional notes: Brygoo and Roux-Estève (1981) described a new subspecies, *Melanoseps occidentalis zairensis*, from the Democratic Republic of Congo, distinguished from the nominotypical form by its ventral scale count (Chirio and Ineich 2006), although subsequent authors have treated the species as monotypic (Chirio and LeBreton 2007; Trape et al. 2012).



MAP 205. Distribution of *Melanoseps occidentalis* in Angola.

Genus *Mochlus* Günther, 1864

Mochlus sundevallii (Smith, 1849)

SUNDEVALL'S WRITHING SKINK

Eumices [sic] (*Riopa*) *sunderallii* Smith 1849b:11. Holotype: BMNH 1946.8.7.3 (formerly BMNH 65.5.4.59) (collector A. Smith) (see notes below). Type locality: "country to the eastward of the Cape Colony" [South Africa; "probably from W. Transvaal" fide Broadley (1966a:4)].

Mochlus afer: Bocage (1867b:222, 1867c:227).

Eumeces reticulatus: Bocage (1879c:88).

Lygosoma sundevalii: Boulenger (1887:307), Bocage (1895a:49), Branch (1998:150).

Lygosoma modestum: Monard (1937b:94); Frade (1963:253).

Lygosoma modesta modesta: Hellmich (1957b:57), Loveridge (1957:215).

Mochlus sundevalii sundevalii: Laurent (1964a:78), Bates et al. (2014:259).

Riopa sundevalli: Haacke (1965:18).

Riopa sundevalii sundevalii: Broadley (1966a:4).

Lygosoma sundevalii: Spawls et al. (2004:146).

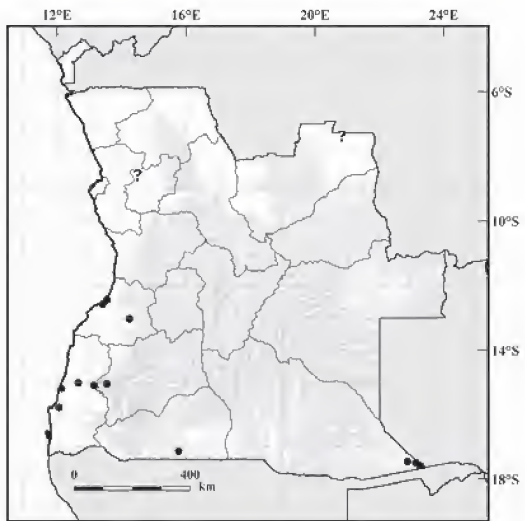
Mochlus sundevalii: Wagner et al. (2009:2), Spawls (2017), Ceriaco et al. (2016a:56), Conradie et al. (2016:25).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is widely distributed mainly in southeastern Africa, from Uganda south to Mozambique and Zimbabwe, and west to Namibia, Zambia, and Angola.

Occurrences in Angola (Map 206): The species occurs in southern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:78). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:57). **Benguela:** “Catumbella” [-12.43333, 13.55000] (Bocage, 1867b:222, 1895a:49); “Benguela” [-12.58333, 13.41667] (Bocage, 1867b:222, 1895a:49; Boulenger 1887:307; Broadley 1966a:3); “Alto Cubal” [-13.03333, 14.25000] (Hellmich 1957b:57). **Huíla:** “Huila” [-15.05000, 13.55000] (Laurent 1964a:78). **Namibe:** “10 mls E of Caracul” [-15.01667, 12.66667] (Haacke 1965:18; Broadley 1966a:4; Ceriaco et al. 2016a:56); “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:49; Ceriaco et al. 2016a:56); “Mossamedes” [-15.20000, 12.15000] (Bocage 1867b:222, 1895a:49; Ceriaco et al. 2016a:56); “Rio Coroca” [-15.78333, 12.06667] (Bocage 1895a:49; Ceriaco et al. 2016a:56). **Cunene:** “Mupanda (Kuanyama)” [-17.13333, 15.76667] (Monard 1937b:94; Broadley 1966a:4). **Cuando Cubango:** “Cuando basin (39)” [-17.46333, 22.86638] (Conradie et al. 2016:9, 10, 12); “Cuando basin (42)” [-17.49611, 23.13444] (Conradie et al. 2016:9, 10, 12); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9, 10, 12).

Taxonomic and distributional notes: This species was previously included in *Lygosoma*, which is now restricted to Asia (Wagner et al. 2009). This species is endemic to Africa and widely distributed mainly in southeastern Africa (Bates et al. 2014). There are two Angolan records from “Dundo” (Laurent 1964a) and “Piri-Dembos” (Hellmich 1957b) that probably correspond to a misidentification, since the distribution range for the species in the country is restricted to the southern regions. Smith’s description appears to refer to a single individual and FitzSimons (1937) identified one potential BMNH specimen matching the description. This corresponds to BMNH 1946.8.7.3 and is entered in the BMNH registers as presented by Sir Andrew Smith but, oddly, as coming via the St. Petersburg Museum (ZIL).



MAP 206. Distribution of *Mochlus sundevalii* in Angola.

Genus *Panaspis* Cope, 1868

Panaspis breviceps (Peters, 1873)

PETERS' SNAKE-EYED SKINK

Euprepes (Mabuia) breviceps Peters 1873:604. Syntypes: ZMB 6303 (purchased from [H.H. ?] Higgins), 8017 (collector A. Reichenow). Type locality: “Gabon” (ZMB 6303) and “Cameruns” [Cameroon] (ZMB 8017).

Lygosoma (Panaspis) breviceps: Parker (1936:139).

Panaspis breviceps: Mittleman (1952:17), Perret (1973:595, 1975:8), Fuhn (1972:266), Greer (1974:29), Schmitz et al. (2005:23), Chirio and LeBreton (2007:272), Trape et al. (2012:376), Medina et al. (2016:410).

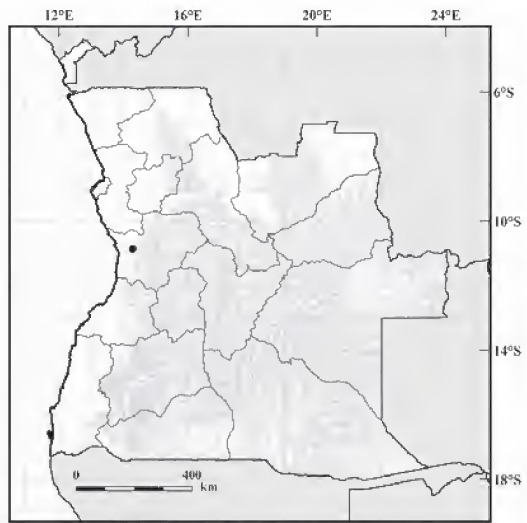
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Cameroon, Central African Republic, Gabon into the central Democratic Republic of Congo to Angola.

Ocurrences in Angola (Map 207): The species is represented by a single west central Angolan record. **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:139; Fuhn 1972:266).

Taxonomic and distributional notes:

Bauer et al. (2003) provided a detailed explanation for the recognition of two syntypes, rather than a single holotype. The specific epithet *breviceps* (Peters, 1873) has successively been associated with several genera. Fuhn (1972) and Perret (1973) placed it in *Panaspis*, which had been revalidated by Mittleman (1952). Broadley (1989), however, treated it as *Leptosiphos (Lacertaspis) breviceps*. Most recently Medina et al. (2016) included it in an expanded genus *Panaspis* in which they included species formerly assigned to *Afroablepharus* based on a molecular phylogenetic revision of the group.



MAP 207. Distribution of *Panaspis breviceps* in Angola.

Panaspis cabindae (Bocage, 1866)

CABINDA SNAKE-EYED SKINK

Ablepharus cabindae Bocage 1866b:64. Syntypes: MBL (3 specimens) numbers not known (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: “Cabinda (Afrique occidentale au nord du Zaïre)” Cabinda Province, Angola.

Ablepharus Cabindae: Bocage (1866a:45, 1867b:224, 1887a:179, 1897a:196).

Ablepharus cabindae: Peters (1877a:614), Bocage (1895a:51), Boulenger (1887:352), Ferreira (1904:116), Parker (1936:136).

Ablepharus aeneus: Boulenger (1887:352).

Riopa (Panaspis) cabindae: Smith (1937:229).

Panaspis cabindae: Greer (1974:29), Perret (1975:8), Schmitz et al. (2005:23), Ineich and Schmitz (2010), Ceriaco et al. (2016b:65), Ceriaco et al. (2016a:57), Medina et al. (2016:411).

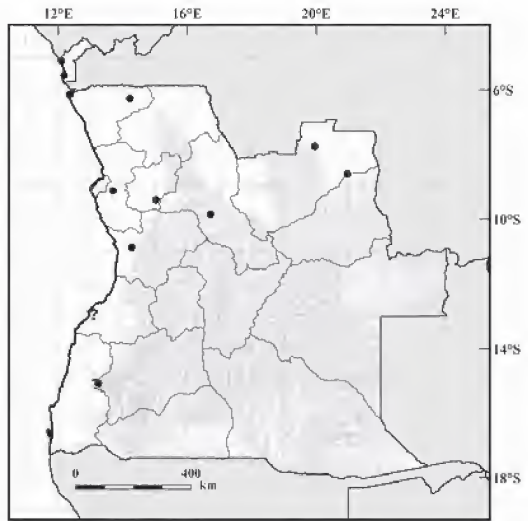
Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known from Angola and the Democratic Republic of Congo.

Ocurrences in Angola (Map 208): The species is known chiefly from western Angola,

including several localities along the coast.

Cabinda: “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:614); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:45, 1866b:64, 1867b:224, 1897a:196; Boulenger 1887:352). **Zaire:** “Soyo” [-6.134903, 12.368935] (Medina et al. 2016:411); “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:179, 1895a:51, 1897a:196). **Bengo:** “Catete” [-9.11667, 13.70000] (Ferreira 1904:116); “Riverine Forest, Bengo” (Medina et al. 2016:411). **Uíge:** “Kimpa Vita Uni Campus” [-8.607967, 20.968804] (Medina et al. 2016:411). **Malanje:** “Cangandala National Park” [-9.84606, 16.72233] (Ceríaco et al. 2016b:65). **Lunda Norte:** “Lagoa Carumbo” [-7.74422, 19.95467] (Branch and Conradie 2015:200; Medina et al. 2016:411). **Kwanza Norte:** “Lucalla” [-9.40000, 15.03333] (Ferreira 1903:116). **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:139). **Benguela:** “Dombe” [-12.95000, 13.10000] (Bocage 1867b:224, 1895a:51, 1897a:196). **Huíla:** “S Leba Pass” [-15.07003, 13.24339] (Medina et al. 2016:411); “Benere Campsite near Jamba” (Medina et al. 2016:411). **Namibe:** “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:51, 1897a:196; Ceríaco et al. 2016a:57).



MAP 208. Distribution of *Panaspis cabindae* in Angola.

Taxonomic and distributional notes: The genus *Panaspis* was erected by Cope (1868) to accommodate his newly described *Panaspis anaeus* from Angola (Boulenger 1887), for some time considered a synonym of *Ablepharus cabindae* Bocage, 1866 (Perret 1975; Schmitz et al., 2005). Boulenger (1887) placed the entire genus *Panaspis* into the synonymy of *Ablepharus*, although Smith (1937) regarded it as a subgenus in the genus *Riopa* Gray, 1839. Mittleman (1952) revised the genera belonging to the subfamily Lygosominae and regarded the genus *Panaspis* as valid. Greer (1974) erected the new genus *Afroablepharus* for those species with an ablepharine eye, while all species with a movable lower eyelid, including *P. cabindae* with its preablepharine eye were included in *Panaspis*. Most recently Medina et al. (2016) included it in an expanded genus *Panaspis* in which they included species formerly assigned to *Afroablepharus* based on a molecular phylogenetic revision of the group. The currently accepted range for the species in Angola is limited to the northwestern regions (Schmitz et al. 2005; Ineich and Schmitz 2010), and records from “Dombe,” Benguela Province, and “Capangombe,” Namibe Province, certainly correspond to another congener. Unfortunately, the relevant specimens were destroyed in the 1978 fire in the Museu Bocage.

***Panaspis maculicollis* Jacobsen and Broadley, 2000**

SPECKLE-LIPPED SNAKE-EYED SKINK

Panaspis maculicollis Jacobsen and Broadley, 2000:65, fig. 3b. Holotype: TM 76922 (collectors N.H.G. Jacobsen and R.E. Newbery). Type locality: “Klein Tshipise, Mutale District, Northern Province [= Limpopo Province], South Africa.”

Panaspis maculicollis: Conradie et al. (2016:25), Medina et al. (2016:414).

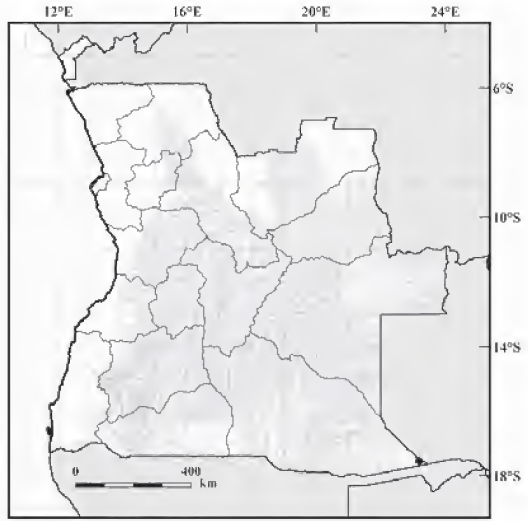
Global conservation status (IUCN): Not Evaluated.

Global distribution: Centered on the Kalahari sand areas of northern Botswana and western

Zimbabwe, extending eastwards via the Zambezi and Limpopo valleys into western Mozambique and Umpopo Province of South Africa.

Ocurrences in Angola (Map 209): A single record for southern Angola. **Cuando Cubango:** “Cuando basin (43)” [-17.53500, 23.18916] (Conradie et al. 2016:25; Medina et al. 2016:411).

Taxonomic and distributional notes: Greer (1974) erected the new genus *Afroablepharus* for species with an ablepharine eye, following a suggestion first made by Smith (1935). Perret (1975) treated *Afroablepharus* as a subgenus of *Panaspis*. However, Medina et al. (2016) demonstrated that *Panaspis* was made paraphyletic by *Afroablepharus* and synonymized the latter with the former, which has priority. Conradie et al. (2016) collected a single individual of *P. maculicollis* from Cuando Cubango Province, establishing the first record of this species in Angola.



MAP 209. Distribution of *Panaspis maculicollis* in Angola.

Panaspis aff. *wahlbergii* (Smith, 1849)

Cryptoblepharus wahlbergii [sic] Smith 1849:10. Syntypes: BMNH 1946.8.18.49-50 (formerly BMNH 65.5.4.112-113). Other unlocated syntypes are implied (*vide* FitzSimons 1937:269). Type locality: “country to the eastward of the Cape Colony” (Smith 1849:10), [= Natal], South Africa.

Ablepharus Wahlbergii: Bocage (1895a:52).

Ablepharus wahlbergii: Boulenger (1905:111), Loveridge (1957:219).

Afroablepharus wahlbergii: FitzSimons (1937:269), Greer (1974:32), Perret (1975:8), Schmitz et al. (2005:19), Bates et al. (2014:257).

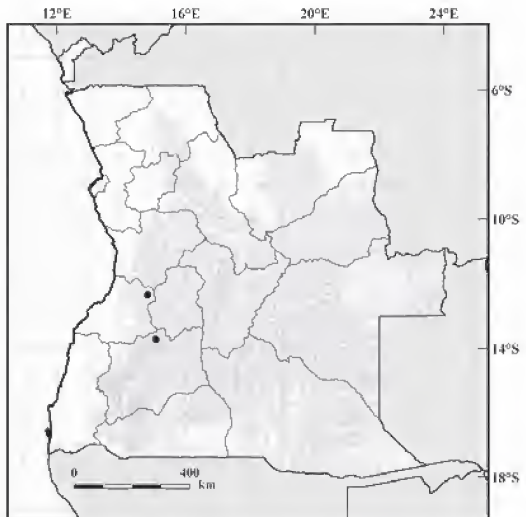
Panaspis wahlbergii: Branch (1998:159), Jacobsen and Broadley (2000:63), Branch and Conradie (2015:200), Medina et al. (2016:410).

Global conservation status (IUCN): Not Evaluated.

Global distribution: Based on molecular data published by Medina et al. (2016) *P. wahlbergii sensu stricto* may be limited to southeastern Africa, however, specimens currently assigned to *P. wahlbergii sensu lato* are distributed from Tanzania and the southern Democratic Republic of Congo south to South Africa.

Ocurrences in Angola (Map 210): The species is poorly documented in Angola and it might be more widespread in the country. **Benguela:** “Cahata” [-13.73333, 15.06667] (Bocage 1895a:52). **Huíla:** “Caconda”

WAHLBERG’S SNAKE-EYED SKINK



MAP 210. Distribution of *Panaspis* aff. *wahlbergii* in Angola.

[-12.35000, 14.81667] (Bocage 1895a:52). **Undetermined Locality:** “Between Benguela and Bihé” (Boulenger 1905:111).

Taxonomic and distributional notes: The African snake-eyed skinks have been subject to large scale taxonomic changes both at the generic and subgeneric levels (Fuhn 1969; Perret 1973, 1975; Greer 1974; Schmitz et al. 2005; Medina et al. 2016; see also notes in above species accounts). *Panaspis wahlbergii* has long been used to refer to skinks occurring throughout much of southern and eastern Africa. The discovery by Jacobsen (1989) of the species subsequently described as *P. maculicollis* Jacobsen and Broadley, 2000, in sympatry with *P. wahlbergii* revealed that older records of *Panaspis* need to be carefully investigated. The molecular phylogeny of Medina et al. (2016) has identified numerous species level lineages within the range previously attributed to *P. wahlbergii*. Specimens superficially resembling *P. wahlbergii* have recently been collected in Quiçama National Park, Luanda Province (M. Marques and L. Ceriaco *pers. obs.*) The misspelling of the specific epithet in the original description was corrected by Smith in an errata slip issued with the original work, thus the corrected version of the name (*wahlbergii*) is ICZN Code compliant.

Genus *Sepsina* Bocage, 1866

Sepsina angolensis Bocage, 1866

ANGOLAN REDUCED-LIMB SKINK

Sepsina angolensis Bocage 1866b:63. Holotype: MBL specimen number unknown (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança, à l’interieur d’Angola” [= Calandula,] Malanje Province, Angola.

Sepsina angolensis Bocage (1866a:45, 1867b:223, 1870:68, 1895a:53, 1896a:111, 1897a:197), Peters (1881:147), Boulenger (1887:421, 1905:111), Ferreira (1904:117), Monard (1937b:95), Mertens (1938a:438), de Witte and Laurent (1943:16), Laurent (1964a:81), Branch and McCartney (1993:1), Branch (1998:1467), Ceriaco et al. (2016a:56).

Scelotes ungolensis: Hellmich (1957a:68).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from the Democratic Republic of Congo, Angola, Zambia and northern Namibia.

Occurrences in Angola (Map 211):

Species records are widely distributed across the entire country, except the far northwest and northeastern regions.

Bengo: “Catete” [-9.11667, 13.70000] (Ferreira 1904:117).

Kwanza Norte: “Zembe” [-9.31667, 14.66667] (Ferreira 1904:117).

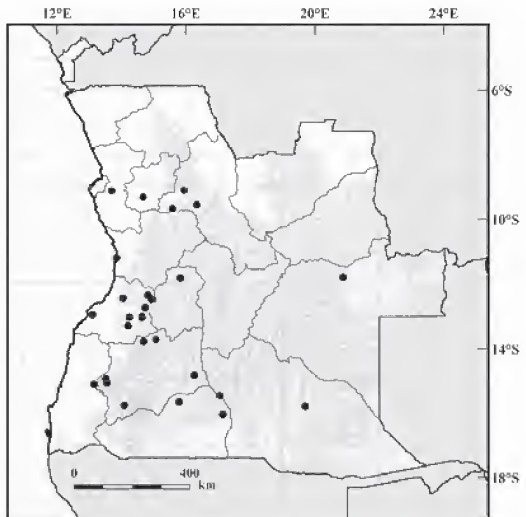
Malanje: “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:45, 1866b:63, 1867b:223, 1895a:53, 1897a:197); “Malanje” [-9.55000, 16.35000] (Bocage 1895a:53); “Pungo-Andongo” [-9.66667, 15.58333] (Boulenger 1905:111).

Moxico: “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:81).

Kwanza Sul: “Novo Redondo” [-11.20000, 13.85000] (Bocage 1867b:223).

Huambo: “Bimbi” [-11.81667, 15.83333] (Monard 1937b:95).

Benguela: “Ebanga” [-12.73333, 14.81667] (Bocage 1895a:52).



MAP 211. Distribution of *Sepsina angolensis* in Angola.

14.73333] (Monard 1937b:95); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:111); “Cahata” [-12.35000, 14.81667] (Bocage 1895a:53); “Quissange” [-12.43333, 14.05000] (Bocage 1895a:53); “Quidumbo” [-12.46667, 14.93333] (Bocage 1895a:53); “Dombe” [-12.95000, 13.10000] (Bocage 1867b:223); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:68); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:438); “Ganda” [-13.03333, 14.63333] (Hellmich 1957a:68). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:53); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:95); “Indungu” [-14.81667, 16.26667] (Monard 1937b:54); “Boca de Humpata, Sá da Bandeira” [-14.93333, 13.51667] (Laurent 1964a:81); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:53); “Chibemba (Gambos), Cunene” [-15.75000, 14.08333] (Laurent 1964a:81). **Namibe:** “Capangombe” [-15.10000, 13.15000] (Monard 1937b:95; Ceriaco et al. 2016a:56). **Cunene:** “Kuvela” [-15.65000, 15.80000] (Monard 1937b:95); “Chimporo” [-16.03333, 17.15000] (Monard 1937b:95). **Cuando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1937b:95); “vicinity of Cuito Cuanavale - approximately 75 km W of Mavinga” [-15.78333, 19.70000] (Branch and McCartney 1993:1). **Undetermined Locality:** “Cuango” (Peters 1881:147; Bocage 1895a:53) (Malanje Province, impossible to georeferenced. See History Section for more detailed information).

Taxonomic and distributional notes: None.

Sepsina bayonii (Bocage, 1866)

BAYÃO'S REDUCED-LIMB SKINK

Dumerilia Bayonii Bocage 1866b:63. Holotype: MBL specimen number unknown (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: “Loanda” [= Luanda], Luanda Province, Angola.

Scelotes bipes: Günther (1865a:480).

Dumerilia Bayonii: Bocage (1866a:45)

Scincodipus conicus: Peters (1877a:614).

Dumerilia Bayonii: Bocage (1882a:299, 1897a:197).

Sepsina bayonii: Boulenger (1887:422), Frade (1963:252).

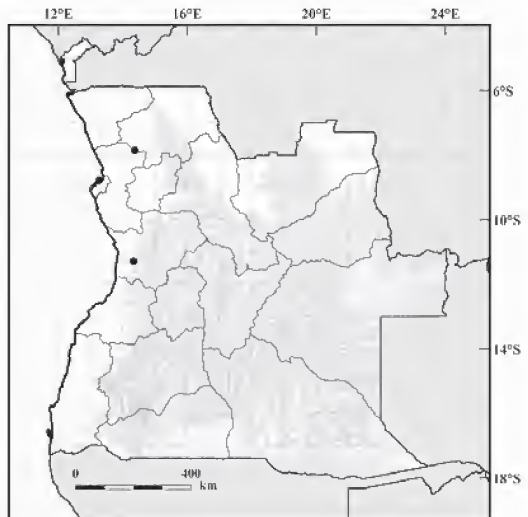
Sepsina (Dumerilia) Bayonii: Bocage (1895a:55).

Dumerilia Bayonii: de Witte and Laurent (1943:16).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and the Democratic Republic of Congo.

Ocurrences in Angola (Map 212): The species occurs in the northwest of the country, including the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:614; Bocage 188ab:299, 1895a:55). **Luanda:** “Loanda (Forte do Penedo)” [-8.78333, 13.26667] (Bocage 1866a:45); “Loanda” [-8.83333, 13.26667] (Bocage 1866b:63, 1882a:299, 1895a:55, 1897a:197). **Bengo:** “Ambriz” [-7.844312, 13.106493] (Boulenger 1887:422; Bocage 1895a:55). **Kwanza Sul:** “Conda” [-11.28333, 14.33333] (Günther 1865a:480). **Undetermined:** “Carangigo” (Boulenger 1887:422; Bocage 1895a:55).



MAP 212. Distribution of *Sepsina bayonii* in Angola.

Taxonomic and distributional notes: The species remains poorly known and may have a broader distribution than currently appreciated. Specimens were recently collected at Quiçama National Park, Bengo Province (pers. obs.). Günther (1865a) mentioned *Scelotes bipes* (Linnaeus, 1766) collected by Welwitsch in “Condo,” in Kwanza Sul Province. *Scelotes bipes* is endemic to South Africa and this record is likely based on *S. bayonii*, which likewise lacks forelimbs. We tentatively include this record here.

***Sepsina copei* Bocage, 1873**

COPE’S REDUCED-LIMB SKINK (Endemic)

Sepsina Copei Bocage 1873b:212. Syntypes: MBL (3 specimens) catalogue numbers unknown (collector J.A. d’Anchieta [Dombe] F.A.P. Bayão [Novo Redondo]), destroyed by fire 18 March 1978. Type locality: “Dombe,” Benguela Province and “Novo Redondo, au nord de Benguela sur le littoral” [= Sumbe], Kwanza Sul Province, Angola.

Sepsina copei: Boulenger (1887:421).

Sepsina Copei: Bocage (1895a:54, 1897a:197).

Sepsina copei: de Witte and Laurent (1943:16), Ceriaco et al. (2016a:57).

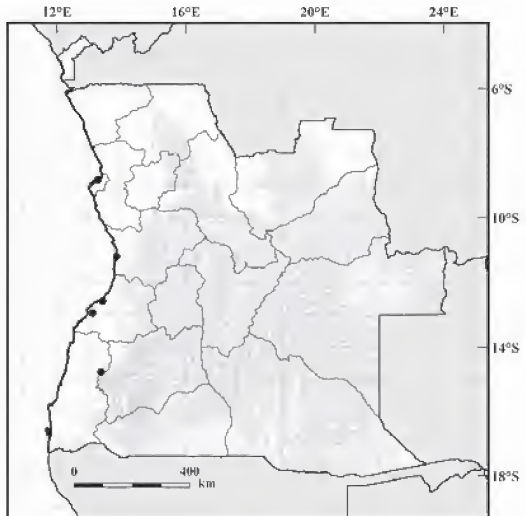
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 213): The species occurs in western Angola along the coast. **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1895a:54, 1897a:197). **Kwanza Sul:** “Novo Redondo” [-11.20000, 13.85000] (Bocage 1873b:212, 1895a:54, 1897a:197). **Benguela:** “Benguela” [-12.58333, 13.41667] (Boulenger 1887:421; Bocage 1895a:54); “Dombe” [-12.95000, 13.10000] (Bocage 1873:212, 1895a:54, 1897a:197). **Namibe:** “Biballa” [-14.76667, 13.36667] (Bocage 1895a:54, 1897a:197; Ceriaco et al. 2016a:57).

Taxonomic and distributional notes:

Sepsina copei is poorly known and like its congeners, its taxonomic status has never been thoroughly investigated.



MAP 213. Distribution of *Sepsina copei* in Angola.

Genus *Trachylepis* Fitzinger, 1843

***Trachylepis acutilabris* (Peters, 1862)**

WEDGE-SNOURED SKINK

Euprepes acutilabris Peters 1862a:19. Syntypes: ZMB 4214, 4215, 4216, 64286–90 (formerly ZMB 4214 part), 64348–49 (formerly ZMB 4216 part) *fide* Bauer et al. (2003) (collector C.H. Hahn) (see notes below). Type locality: “Neu-Barmen” [= Gross Barmen, Otjozondjupa Region, Namibia].

Euprepes acutilabris: Bocage (1870:68), Peters (1877a:614).

Mabuya acutilabris: Boulenger (1887:208), Bocage (1895a:46), Schmidt (1919:551), Monard (1937b:37), Mertens (1937a:11), Laurent (1947:8, 1954a:65, 1964a:75), Hellmich (1957a:58, 1957b:53), Branch (1998:151).

Trachylepis acutilabris: Haacke (2008:90), Ceriaco et al. (2016a:34, 57).

Global conservation status (IUCN): Not Evaluated.

Global distribution: This species occupies sandy substrates from Cabinda and the western Democratic Republic of Congo, through western Angola continuously through to central Namibia, with several additional scattered populations.

Occurrences in Angola (Map 214): The

species occurs in the western Angola, along the coast. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:614; Bocage 1895a:46). **Zaire:** “Noki” [-5.86667, 13.43333] (Schmidt 1919:551-553), “António [do Congo]” [-6.13333, 12.36667] (Schmidt 1919:551-553). **Luanda:** “Luanda” [-8.83333, 13.26667] (Hellmich 1957a:58). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1895a:46). **Benguela:** “Plage de Lobito (Restinga)” [-12.33333, 13.50000] (Laurent 1954a:65, Laurent 1964a:75); “Lobito” [-12.35000, 13.55000] (Monard 1937b:94; Mertens 1937a:11); “Catumbella” [-12.43333, 13.55000] (Bocage 1895a:46); “Benguela” [-12.58333, 13.41667] (Boulenger 1887:208; Bocage 1895a:46); “Baía dos Elefantes” [-13.23333, 12.73333] (Laurent 1947:8);

“Mullet Bay” [-13.40000, 12.56667] (Laurent 1947:8); “Baía Farta” [-12.60000, 13.20000] (Laurent 1947:8); “Baía de St. Bras, près Lobito” (Laurent 1947:8). **Namibe:** “Cahinde-Ongueira” [-15.48333, 13.36667] (Hellmich 1957b:53; Ceriaco et al. 2016a:57); “Désert de Mossâmedes, 35 km au sud de la ville” [-15.49752, 12.20051] (Laurent 1964a:75; Ceriaco et al. 2016a:57); “Rio Coroca” [-15.78333, 12.06667] (Bocage 1895a:46; Ceriaco et al. 2016a:57); “Iona National Park, 3.4 km south-west (by air) of Espinheira, vicinities of Lion Cave” [-16.81514, 12.33714] (Ceriaco et al. 2016a:34); “Iona National Park, car wreck 20 km south-west (by air) of Espinheira” [-16.93161, 12.24595] (Ceriaco et al. 2016a:34); “Namibe-Lubango road, road marker 59, 1.8 km (by road) of Caraculo, north side of the road” [-15.01647, 12.64267] (Ceriaco et al. 2016a:34); Pico Azevedo [-15.53400, 12.49197] (Ceriaco et al. 2016a:34). **Undetermined Locality:** “Carangigo” (Boulenger 1887:208; Bocage 1895a:46).

Taxonomic and distributional notes: Previously placed in the genus *Mabuia*, typical skinks from the Afro-Malagasy region were assigned to *Trachylepis* Fitzinger, 1843 by Bauer (2003). The species appears to vary little morphologically across its extensive range. Additional possible syntypes include MNHN 1471 (Brygoo 1985), BMNH 67.6.14.2–3, 1935.2.8.9, 1946.8.19.19 (Boulenger 1887), and MCZ R-21037–38. (Barbour and Loveridge 1929). As discussed by Bauer et al. (2003), the type series for this species was large, and it is likely that there are numerous specimens outside Berlin that may have syntype status.

Trachylepis affinis (Gray, 1838)

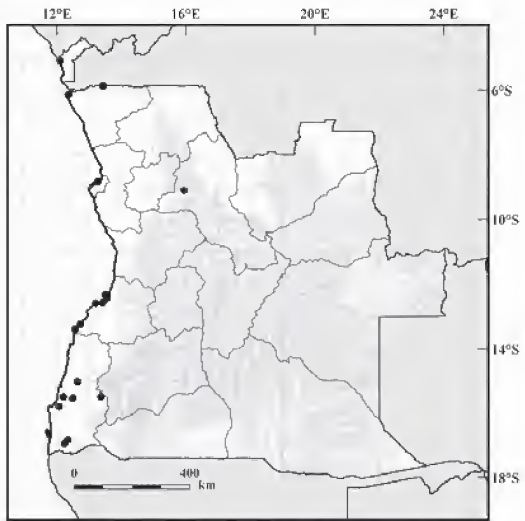
SENEGAL SKINK

Tiliqua affinis Gray 1838:289. Holotype: BMNH 1946.8.18.21 (formerly BMNH xiv.92a) (collector unknown). Type locality: Not stated.

Euprepes Blandingii: Bocage (1866a:44), Peters (1877a:614).

Mabuia Raddonii: Bocage (1895a:40).

Mabuia raddonii: Boulenger (1887:165).



MAP 214. Distribution of *Trachylepis acutilabris* in Angola.

Mabuya radoni: Ferreira (1903:14), Parker (1936:138), Hellmich (1957b:55).

Mabuya affinis: Hoogmoed (1974:6).

Euprepis affinis: Mausfeld-Lafdhiya et al. (2004:159).

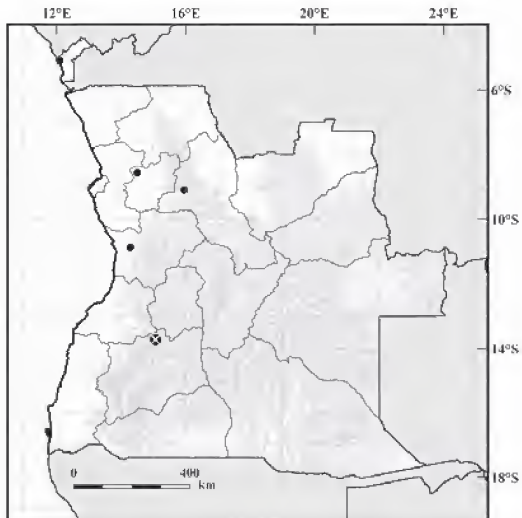
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is a widespread species complex distributed across all of western Africa, from Sénégal to Angola.

Ocurrences in Angola (Map 215): The species occurs in western Angola. However, the accepted distribution range for the species is limited to the northwestern Angola. **Cabinda:** “Chinchoxo (côte d’Loango)” [-5.10000, 12.10000] (Peters 1877a:614; Bocage 1895a:40). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:55). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Ferreira 1903:14). **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:138). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:40).

Taxonomic and distributional notes:

The long and complex history of *Trachylepis* [= *Mabuya*] *affinis* (Gray, 1838) has been reviewed by Hoogmoed (1974). At present there are numerous synonyms, of which two have been applied to Angolan material: *Euprepis blandingii* Hallowell, 1857 and *Euprepis raddoni* Gray, 1845. Molecular phylogenetic studies (Allen 2015) have revealed some significant structure across the distribution, but a thorough revision is needed in order to determine if any of the names in synonymy may be applicable to Angolan populations. The record from “Caconda,” Huíla Province (Bocage 1895a), here plotted with an X, is certainly incorrect, although it is unclear to which other species it may apply.



MAP 215. Distribution of *Trachylepis affinis* in Angola.

***Trachylepis* cf. *albopunctata* (Bocage, 1867)**

ANGOLAN VARIABLE SKINK

Euprepes Oliveiri var. *albo-punctatus* Bocage 1867b:223. Syntypes: MBL specimen numbers unknown (collector J. A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Benguella, and “Catumbella,” [= Benguela and Catumbela], Benguela Province, Angola.

Euprepes angolensis (Bocage 1872:89). Holotype: MBL specimen numbers unknown (collector J. A. d’Anchieta [Biballa] and F. A. P. Bayão [Dondo]), destroyed by fire 18 March 1978. Type locality: “Biballa, dans l’intérieur de Mossamedes” and “Dondo” [= Bibala and Dondo], Namibe and Kwanza Norte provinces, respectively, Angola.

Euprepes Oliveiri: Bocage (1867c:227).

Euprepes angolensis: Bocage (1872:78).

Mabuya varia: Boulenger (1887:202, 1905:111), Bocage (1895a:43, 1896a:111).

Mabuya varia: Schmidt (1933:12), Monard (1937b:87), Mertens (1938a:437), Parker (1936:138), Laurent (1964a:72), Grillitsch et al. (1996:32), Branch (1998:157), Broadley (2000:99).

Mabuya varia varia: Hellmich (1957a:66, 1957b:57), Loveridge (1957: 212).

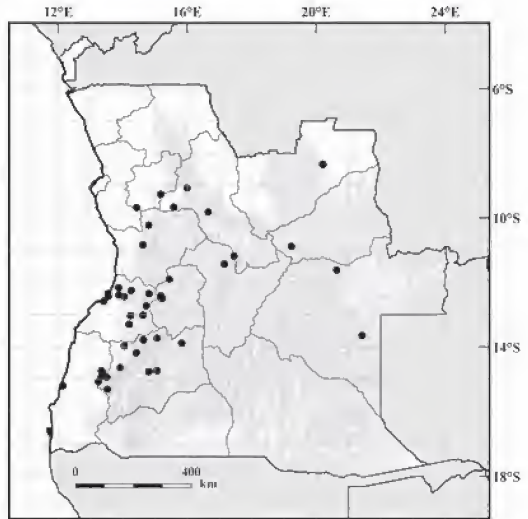
Trachylepis varia: Ceríaco et al. (2016a:31, 58), Ceríaco et al. (2016b:67), Conradie et al. (2016b:26).

Trachylepis varia Clade B: Weinell and Bauer (2018:107).

Global conservation status (IUCN): Not Evaluated.

Global distribution: This taxon occupies much of Angola except the southeast, as well as western Zambia and the former Katanga Province of the Democratic Republic of Congo. The extent of its extralimital distribution is not known.

Ocurrences in Angola (Map 216): The species is widely distributed in Angola, except in the southeast, where it is replaced by *T. damarana*. **Kwanza Norte:** “Ambaca” [-9.26667, 15.18333] (Bocage 1895a:43); “Dondo” [-9.68333, 14.43333] (Bocage 1872:78, 1895a:43; Hellmich 1957b:57); unnamed localities [-10.223, 14.811; -10.839, 14.629; -11.901, 15.45] (Weinell and Bauer 2018:Supplementary Data 3). **Malanje:** “Pungo-Andongo” [-9.66667, 15.58333] (Boulenger 1905:111); “Cangandala National Park” [-9.81858, 16.65403] (Ceríaco et al. 2016b: 67; Weinell and Bauer 2018:Supplementary Data 3); unnamed locality [-9.074, 16] (Weinell and Bauer 2018:Supplementary Data 3). **Lunda Norte:** “Capaia” [-8.33333, 20.20000] (Grillitsch et al. 1996:32). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333]



MAP 216. Distribution of *Trachylepis* cf. *albopunctata* in Angola.

(Laurent 1964a:72). **Moxico:** “Sandando, 85 km east from Luso” [-11.61667, 20.63333] (Laurent 1964a:72). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1933:12); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:12). **Huambo:** “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:138); unnamed locality [-12.503, 15.225] (Weinell and Bauer 2018:Supplementary Data 3). **Benguela:** “Lobito” [-12.35000, 13.55000] (Parker 1936:138); “Cahata” [-12.35000, 14.81667] (Bocage 1895a:43); “Catumbela” [-12.43333, 13.55000] (Bocage 1867c:223; Loveridge 1957:212); “Quis-sange” [-12.43333, 14.05000] (Bocage 1895a:43); “Benguela” [-12.58333, 13.41667] (Bocage 1867b:223; Loveridge 1957:212); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:87); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:66); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:437); “Hanha” [-13.30000, 14.20000] (Bocage 1896:111); unnamed localities [-8.345, 20.212; -8.346, 20.212; -12.163, 13.877; -12.252, 14.266; -11.901, 15.45] (Weinell and Bauer 2018:Supplementary Data 3). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:43); “Sangevé” [-13.88333, 15.83333] (Monard 1937b:87); unnamed localities [-15.317, 13.533; -14.741, 15.058; -14.94, 13.512; -14.184, 14.428; -14.638, 13.928; -14.769, 14.808; -13.65, 21.426; -13.786, 14.643] (Weinell and Bauer 2018:Supplementary Data 3). **Namibe:** “Biballa” [-14.76667, 13.36667] (Bocage 1872:78; Ceríaco et al. 2016a:58); “Mossamedes” [-15.20000, 12.15000] (Bocage 1867c:227; Ceríaco et al. 2016a:58); “Leba Pass” [-15.07003, 13.24339] (Ceríaco et al. 2016a:31); unnamed locality [-14.733, 13.345] (Weinell and Bauer 2018:Supplementary Data 3). **Cuando Cubango:** “Cubango basin (46)” [-14.58981, 16.90739] (Conradie et al. 2016:9, 12, 25); “Cubango basin (47)” [-14.70214, 17.37806] (Conradie et al. 2016:9, 12, 25). **Undetermined locality:** “Between Benguela and Bihé” (Boulenger 1905:111).

Taxonomic and distributional notes: Although considered as *Trachylepis varia* by most authors who have cited these skinks for Angola, a recent molecular and morphological review (Weinell and Bauer 2018) demonstrated that true *T. varia* is absent from Angola, with the Angolan “*varia*” belonging to a separate clade that extends from Angola to Zambia. As noted by Weinell and

Bauer (2018) it is likely that the names *Euprepes olivieri* var. *albo-punctatus* Bocage, 1867 and *Euprepes angolensis* Bocage, 1872 apply to this clade. Boulenger (1887) and Bocage (1895a, 1896a) included both in the synonymy of *varia*. The original description of *albopunctata* is consistent with the morphological characters of members of the Angolan clade, and given its precedence, we tentatively recognize it as the name applicable to *varia*-like *Trachylepis* in Angola, exclusive of the southeast. *Euprepis angolensis*, which we consider as a probable junior synonym of *T. albopunctata* has been considered by some to refer to the same species as *Mabuia striata angolensis* Monard, 1937 (see *Trachylepis monardi* account). Unfortunately, all of the original Bocage specimens associated with this name were destroyed, exacerbating the task of trying to link this name with particular specimens in the *T. varia* complex. It is likely that some of the older literature records may refer to other species of *Trachylepis* outside the *T. varia* complex, so our assessment of the distribution of this group in Angola should be interpreted as a rough estimate at best. A review of the Angolan *Trachylepis* being prepared to resolve this and other similar problems.

Trachylepis bayonii (Bocage, 1872)

BAYÃO'S SKINK

Euprepes Bayonii (Bocage 1872:75). Syntypes: MBL specimen numbers unknown, BMNH 1946.8.19.13 (formerly BMNH 66.6.11.8), ZMB 6477 (collector F.A.P. Bayão [var. A – Duque de Bragança] and J.A. d'Anchieta [var. B – Huíla]), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança dans l'intérieur d'Angola” [= Calandula], Malanje Province and “Huilla, plateau assez élevé dans l'intérieur de Mossamedes” [= Huíla], Huíla Province, Angola.

Mabuya bayonii huilensis (Laurent 1964a:67). Holotype: MD 1886 (collector A. Barros Machado). Type locality: “Boca de Humpata, environs de Sá da Bandeira, Huíla” [= Humpata], Huíla Province, Angola.

Euprepes Gravenhorstii: Bocage (1866a:44)

Euprepes Bayonii (Bocage 1870:68, 1879b:95, 1887a:179).

Euprepes Bayonii var. *A*: Bocage (1872:75).

Euprepes Bayonii var. *B*: Bocage (1872:75).

Mabuia bayonii Boulenger (1887:201)

Mabuia Bayonii Bocage (1895:38).

Mabuya bayonii: Boulenger (1887:201, 1905:111), Bocage (1895a:38, 1897a:195), Schmidt (1933:11), Monard (1937b:87), Hellmich (1957b:54), Manaças (1963:234), Spawls et al. (2004:130), Bauer et al. (2003:270).

Mabuya bayonii bayonii: Laurent (1964a:67).

Euprepes Bayonii: Bauer et al. (2003:270).

Trachylepis bayonii: Menegon and Spawls (2011), Ceriaco et al. (2016b:57).

Global conservation status (IUCN): Data Deficient.

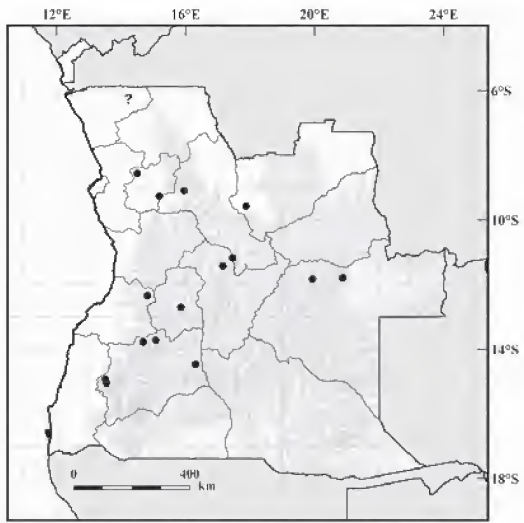
Global distribution: The species has been reported from Angola, the Democratic Republic of Congo, and Kenya and Tanzania, although the East African forms are referable to *T. b. keniensis* (Loveridge, 1956) and are almost certainly specifically distinct from the West African *T. b. bayonii* and *T. b. huilensis*.

Occurrences in Angola (Map 217): The species mainly occurs in central Angola and southwestern Angola. **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:179, 1895a:38). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:54); “Ambaca” [-9.26667, 15.18333] (Boulenger 1905:111). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:44, 1872:75, 1895a:38, 1897a:195; Boulenger 1887:201, 1905:111; Bauer et al. 2003:270). **Lunda Norte:** “Cassange” [-9.58333, 17.86667] (Bocage 1879b:95, 1895a:38; 1897a:195). **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Manaças 1963:263); “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1963:263). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1933:11; Laurent 1964a:67); “Chitau” [-11.43333, 17.15000] (Schmidt

1933:11). **Huambo:** “Santo-Amaro” [-12.70000, 15.85000] (Monard 1937b:87). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:38). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:38); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:87); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:87); “Boca de Humpata, Sá da Bandeira” [-14.93333, 13.51667] (Laurent 1964a:67); “Huilla” [-15.05000, 13.55000] (Bocage 1872:75, 1895a:38).

Taxonomic and distributional notes:

Bocage (1872) distinguished between two varieties: var. A, which corresponds to specimens with a uniform color collected at “Duque de Bragança” [= Calandula] and var. B from the “Huilla Plateau.” He later (Bocage 1895a) separated the uniform specimens from those from throughout the rest of the species range. Laurent (1964a) described *Mabuya bayonii huilensis* from “Boca de Humpata, environs de Sá da Bandeira.” This subspecies, based on a single juvenile specimen, has never been critically assessed, and although it may warrant recognition, we have here lumped all literature records to both it and the nominotypical form pending further research. The record from “S. Salvador do Congo” is out of the expected species range and probably represents a misidentification.



Map 217. Distribution of *Trachylepis bayonii* in Angola.

***Trachylepis binotata* (Bocage, 1867)**

OVAMBO TREE SKINK

Euprepes binotatus Bocage 1867b:223; 1867d:230. Syntypes: MBL specimen numbers unknown, destroyed by fire 18 March 1978, MNHN 1462 *fide* Brygoo (1985), BMNH 1946.8.15.32 (formerly BMNH 67.7.23.26) *fide* Boulenger (1887), ZMB 5830 *fide* Bauer et al. (2003) (collector J.A. d’Anchieta). Type locality: “Benguella”, “Dombe” and “Catumbella” Benguela and Huila provinces, Angola *fide* Bocage (1867b:223).

Euprepes binotatus: Bocage (1879c:88), Brygoo (1985:13).

Mabuya quinquetaeniata: Boulenger (1887:198).

Mabuya binotata: Bocage (1895a:46, 1897a:196), Monard (1937b:91), Hellmich (1957a:59, 1957b:54), Laurent (1964a:68), Branch (1998:151), Bauer et al. (2003:270).

Euprepes binotata: Bauer et al. (2003:270).

Mabuya quinquetaeniata binotata: Mertens (1926:152, 1937a:10, 1938a:437).

Trachylepis binotata: Ceriaco et al. (2016a:57).

Global conservation status (IUCN): Not Evaluated.

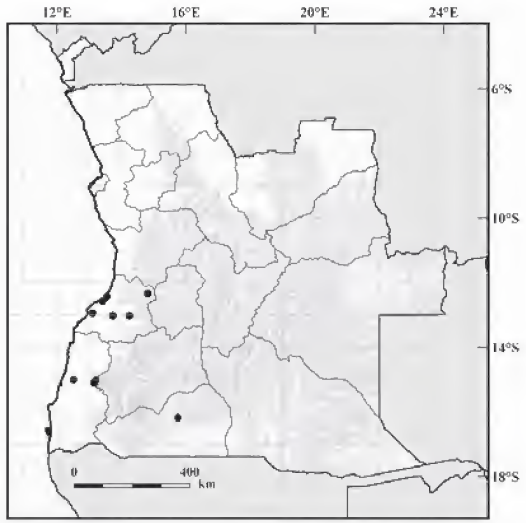
Global distribution: The species is known from southern Angola and northwestern Namibia.

Occurrences in Angola (Map 218): The species occurs in the southwestern Angola. **Benguela:** “Catumbella” [-12.35000, 14.81667] (Bocage 1867b:223, 1895a:46, 1897a:196; Bauer et al. 2003:27); “Benguella” [-12.58333, 13.41667] (Bocage 1867b:223, 1867d:230, 1895a:46, 1897a:196; Boulenger 1887:198; Brygoo 1985:13; Bauer et al. 2003:271); “Dombe” [-12.95000, 13.10000] (Bocage 1867b:223, 1895a:46, 1897a:196; Bauer et al. 2003:271); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:437); “Catengue Station, Benguella” [-13.03333, 13.73333] (Mertens 1926:152, 1937a:10). **Huíla:** “Caconda” [-12.43333, 13.55000] (Bocage 1879c:88). **Namibe:** “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:46; Ceriaco et al. 2016a:57); “50 km Moçâ-

medes road to Sá da Bandeira” [-15.01358, 12.518628] (Laurent 1964a:68; Ceríaco et al. 2016a:57); “Maconjo” [-15.01667, 13.20000] (Bauer et al. 2003:271; Ceríaco et al. 2016a:57). **Cunene:** “Mupa” [-16.18333, 15.75000] (Monard 1937b:91).

Taxonomic and distributional notes:

Bocage (1867b) first named *Euprepes binotatus*, from three localities in Benguela Province, but without a description or diagnosis. In the subsequent paper, Bocage (1867d) published a detailed description but noted only the locality “Benguella” by name. The original type series was large and syntypes were sent to Bocage’s correspondents at other major European museums. Boulenger (1887) erroneously listed the BMNH syntype under *Mabuya quinquetaeniata*.



MAP 218. Distribution of *Trachylepis binotata* in Angola.

***Trachylepis bocagii* (Boulenger, 1887)**

BOCAGE’S SKINK

Euprepes Petersi: Bocage 1872:74. Syntypes (see notes below): MBL specimen numbers unknown (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” [= Calandula] Malanje Province, Angola.

Mabuia bocagii (Boulenger 1887:203). Replacement name for *Euprepes petersi* Bocage, 1872, preoccupied by *E. petersi* Steindachner, 1867 = *Eutropis dissimilis* (Hallowell, 1857).

Euprepes quinquetaeniatus: Bocage (1866a:44).

Mabuia Petersi: Bocage (1895a:42, 1897a:197), Ferreira (1900a:49, 1903:15, 1906:170), Tiedemann and Häupl (1980:43), Tiedemann et al. (1994:53).

Mabuia quinquetaniata: Boulenger (1905:111).

Mabuya bocagii: Parker (1936:136), Mertens (1938a:437), Bauer et al. (2003:275).

Mabuya bocagii bocagii: Hellmich (1957a:60).

Mabuya quinquetaeniata quinquetaeniata: Hellmich (1957b:54).

Mabuya bocagei: Frade (1963:252).

Euprepes quinquetaeniata: Brygoo (1985:90).

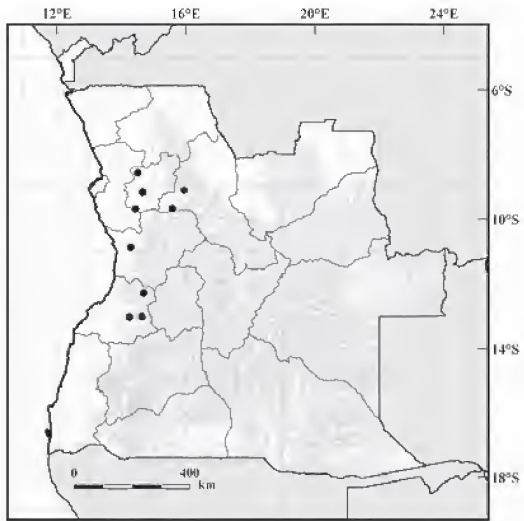
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southern Africa, occurring from Angola, through Zambia to Zimbabwe and Malawi.

Occurrences in Angola (Map 219): The species has been recorded at widely scattered sites in Angola, but is absent from the arid far southwest and the forested areas of the northwest and northeast. **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:44, 1872:74, 1895a:42; Boulenger 1887:203; Brygoo 1985:90; Bauer et al. 2003:275); “Pungo-Andongo” [-9.66667, 15.58333] (Boulenger 1887:203, 1905:111; Bocage 1895a:42). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:54); “Cambondo” [-9.15963, 14.65771] (Ferreira 1906:170); “Dondo” [-9.68333, 14.43333] (Bocage 1972:80, 1895a:42, Tiedemann and Häupl 1980:43; Tiedemann et al. 1994:53). **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:136). **Benguela:** “Quibula” [-12.28333, 14.68333] (Bocage 1895a:42, 1897a:195); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:60); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:437). **Without precise locality:** “with no precise location” (Ferreira 1900a:49).

Taxonomic and distributional notes:

Euprepes petersi Bocage, 1872 was preoccupied by *E. petersii* Steindachner, 1867 (syn. *Eutropis dissimilis* (Hallowell, 1857)) and *Mabuia bocagii* was proposed as a replacement name by Boulenger (1887). As such its type material is identical to that of Bocage (1872). Bocage (1872) applied his name to the species he originally called *Euprepes quinquetaeniata* (Bocage 1866a). His description of *E. petersi* gives details for only a single specimen but his earlier mention of *E. quinquetaeniata* from “Duque de Bragança” reveals that there were originally many specimens in the series in Lisbon. Several of these have been suggested to be potential syntypes of *E. petersi*, including ZMB 6479 in Berlin (Bauer et al. 2003) BMNH 1946.8.15.30 (formerly 64.7.13.23) in London, MNHN 1286 and 1286^a in Paris (Bygoo 1985), and NHMW 16677 in Vienna (Tiedemann and Häupl 1980; Tiedemann et al. 1994). The last of these, however, is from “Dondo” and cannot be part of the type series. Those from London and Paris are from the type locality and are almost certainly part of the series of *E. quinquetaeniata* noted by Bocage (1866a). However, they were received from Lisbon several years before the description of *E. petersi* and were not among those on hand in Lisbon when Bocage prepared the description of *E. petersi*. The date of receipt of the Berlin specimen is unknown, but it is likely that it too significantly predated the description of *E. petersi*. Thus, conservatively, any types of this taxon are likely to have been in Lisbon only, although those specimens in other collections nonetheless provide valuable confirmation of Bocage’s concept of the species. There are several literature records of *T. quinquetaeniata* from Angola, all of which are highly unlikely. This species has a broad distribution across the Sahel, in the Nile Valley and in East Africa, but the nearest records to Angola are in the northeastern Democratic Republic of Congo and even the closely related *T. pulcherrima* (de Witte, 1953) extends no closer than ~1000 km to the nearest purported Angolan sites (Broadley and Bauer 1998). This is borne out by the examination of the specimens upon which these errant records are based. Thus, Malanje and Kwanza Norte references to *T. quinquetaeniata* (Boulenger 1905; Hellmich 1957b) are here referred to *T. bocagii*. *Trachylepis bocagii* has also recently been collected in Quiçama National Park, Bengo Province (M. Marques and L. Ceriaco, pers. obs.).

MAP 219. Distribution of *Trachylepis bocagii* in Angola.***Trachylepis chimbana* (Boulenger, 1887)****CHIMBA SKINK**

Euprepes affinis Bocage 1872:77. Syntypes: MBL 822 (2 specimens), 824 (collector not stated). Type locality: “Rio Chimba, dans l’intérieur de Mossamedes” [= Rio Chimba], Namibe Province, Angola.

Mabuia chimbana Boulenger 1887:204. Replacement name for *Euprepes affinis* Bocage, 1872, preoccupied by *E. affinis* (Gray, 1838).

Euprepes affinis: Bocage (1872:77).

Mabuia chimbana: Bocage (1895a:45, 1897a:195), Schmidt (1933:12), Frade (1963:252).

Mabuya striata angolensis: Hellmich (1957b:56).

Mabuya striata chimbana: Laurent (1964a:69).

Mabuya chimbana: Broadley (1975a:13), Branch (1998:153).

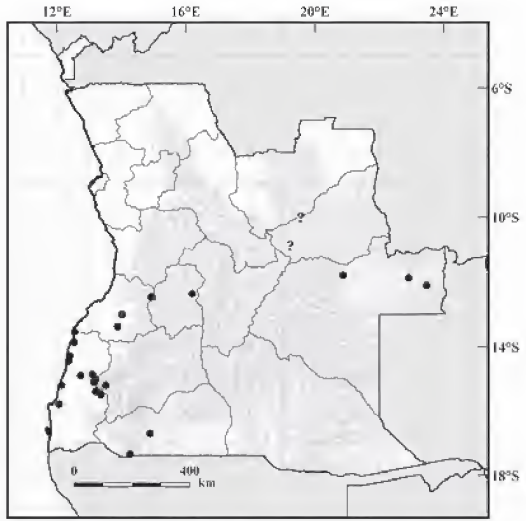
Trachylepis chimbana: Portik and Bauer (2012:128), Ceriaco et al. (2016a:57).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and extreme northern Namibia.

Occurrences in Angola (Map 220): The species occurs in southwest and eastern Angola. **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:69); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:69) [in error]. **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:69); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:69); “Calunda” [-12.11667, 23.46667] (Laurent 1964a:69). **Huambo:** “Bela-Vista (Sanguengue)” [-12.36667, 16.20000] (Hellmich 1957b:56). **Benguela:** “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:45, 1897a:195; Broadley 1975a:14); “10 km E of Caembombo” [-13.01667, 14.01667] (Broadley 1975a:14); “Coporolo” [-13.38333, 13.88333] (Broadley 1975a:14); “5 km S of Catara River on Lucira Road” [-13.55000, 12.55000] (Broadley 1975a:14). **Huíla:** “Jau, around Sá da Bandeira” [-15.20000, 13.51667] (Laurent 1964a:69). **Namibe:** “Lucira” [-13.86667, 12.53333] (Broadley 1975a:14; Ceríaco et al. 2016a:57); “Rio Chimba” [-14.30000, 12.40000] (Bocage 1872:77, 1895a:45, 1897a:195; Boulenger 1887:204; Broadley 1975a:14; Ceríaco et al. 2016a:57); “Chapeau Armando turnoff, Mossamedes” [-14.45000, 12.36667] (Broadley 1975a:14; Ceríaco et al. 2016a:57); “Assuncao” [-14.86667, 13.10000] (Broadley 1975a:14; Ceríaco et al. 2016a:57); “14 km NE Caraculo” [-14.90214, 12.74229] (Broadley 1975a:14; Ceríaco et al. 2016a:57); “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:45, 1897a:195; Broadley 1975a:14; Ceríaco et al. 2016a:57); “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:45, 1897a:195; Broadley 1975a:14; Ceríaco et al. 2016a:57); “Mossamedes” [-15.20000, 12.15000] (Boulenger 1887:204; Ceríaco et al. 2016a:57); “Saiona River, NW of Cainde” [-15.40000, 13.20000] (Broadley 1975:14; Ceríaco et al. 2016a:57); “Cainde” [-15.48333, 13.36667] (Broadley 1975a:14; Ceríaco et al. 2016a:57); “Rio Coroca” [-15.78333, 12.06667] (Broadley 1975a:14; Ceríaco et al. 2016a:57). **Cunene:** “Othinjau” [-17.33333, 14.26667] (Hellmich 1957b:56); “Humbe” [-16.68333, 14.90000] (Schmidt 1933:12). **Undetermined locality:** “12 km W of Humbia” (Broadley 1975a:14); “Huke” (Broadley 1975a:14).

Taxonomic and distributional notes: Boulenger (1887) provided *E. chimbana* as a replacement name for Bocage’s (1872) *Euprepes affinis* which was preoccupied. Laurent (1964a) treated *M. chimbana* as a subspecies of *Mabuya striata* but Broadley (1975a) treated it as a member of the *Trachylepis lacertiformis* complex. It seems likely that Laurent’s concept of this species was different than that of other authors and that his localities, far to the east of what is usually regarded as a western species (Broadley 1975a; Branch 1998; Portik and Bauer 2012), apply to another congener. These specimens have recently been rediscovered and are under study.



MAP 220. Distribution of *Trachylepis chimbana* in Angola.

Trachylepis damarana (Peters, 1870)

KALAHARI VARIABLE SKINK

Euprepes damaranus Peters 1870:20. Lectotype: ZMB 6153 (collector W. C. H. Peters). Type locality: “Damaraland,” [= north central Namibia], Namibia.

Trachylepis varia: Conradie et al. (2016b: 26).

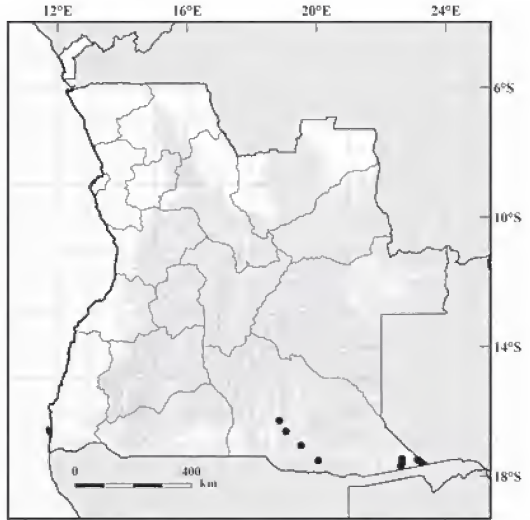
Trachylepis damarana: Weinell and Bauer (2018:215).

Global conservation status (IUCN): Not Evaluated.

Global distribution: *T. damarana* is distributed from southeastern Angola and northeastern Namibia, across northern Botswana to Zimbabwe and adjacent western areas of Mozambique and the northeastern South Africa.

Occurrences in Angola (Map 221): The species occurs only in the southeastern areas of the country. **Cuando Cubango:** “Cuito basin (30c)” [-17.51222, 20.06027] (Conradie et al. 2016:9–10, 25; Weinell and Bauer 2018:Supplementary Data 3); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9–10, 25; Weinell and Bauer 2018:Supplementary Data 3); “Cuito basin (32)” [-17.04880, 19.53333] (Conradie et al. 2016:9–10, 25; Weinell and Bauer 2018:Supplementary Data 3); “Cuando basin (37)” [-17.67833, 22.61475] (Conradie et al. 2016:9–10, 25; Weinell and Bauer 2018:Supplementary Data 3); “Cuando basin (38)” [-17.58830, 22.65694] (Conradie et al. 2016:9–10, 25; Weinell and Bauer 2018:Supplementary Data 3); “Cuando basin (39)” [-17.46333, 22.86638] (Conradie et al. 2016:9–10, 25; Weinell and Bauer 2018:Supplementary Data 3); “Cuando basin (42)” [-17.49611, 23.13444] (Conradie et al. 2016:9–10, 25; Weinell and Bauer 2018:Supplementary Data 3); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9–10, 25; Weinell and Bauer 2018:Supplementary Data 3); “Cubango basin (59)” [-16.28392, 18.84744] (Conradie et al. 2016:9, 12, 25; Weinell and Bauer 2018:Supplementary Data 3).

Taxonomic and distributional notes: Originally described by Peters (1870) from “Damara-land,” then applicable to much of northern Namibia, this species was recently resurrected from the synonymy of *Trachylepis varia*. Broadley (1966, 2000) considered *T. damarana* as a synonym of *T. varia*, but recently Weinell and Bauer (2018) provided molecular and morphological evidence that supports its validity as a distinct species.



MAP 221. Distribution of *Trachylepis damarana* in Angola.

Trachylepis hoeschi (Mertens, 1954)

HOESCH'S SKINK

Mabuya hoeschi Mertens 1954:178, fig. 4. Holotype: SMF 45681 (collector W. Hoesch). Type locality: “Roessing-Berge, östlich von Swakopmund, SW-Afrika” [= Rössing Mts., east of Swakopmund, Erongo Region], Namibia.

Mabuya hoeschi: Laurent (1964a:68), Branch (1998:153).

Trachylepis hoeschi: Ceriaco et al. (2016b:32, 57).

Global conservation status (IUCN): Not Evaluated.

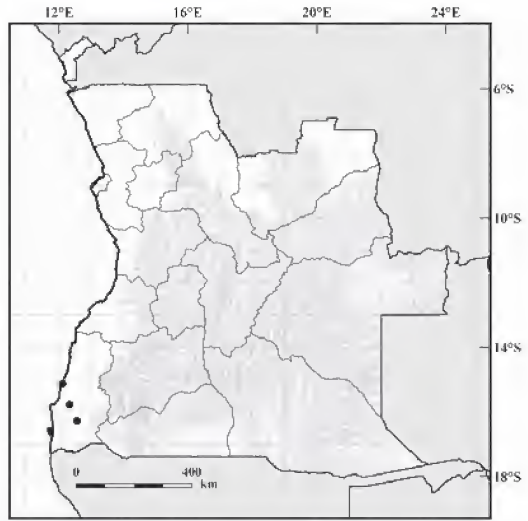
Global distribution: The species is restricted to southwestern Africa, occurring from northwestern Namibia to southwestern Angola.

Occurrences in Angola (Map 222): The species is limited to the Namibe desert region. **Namibe:** “Plage «das Conchas», Moçâmedes” [-15.13333, 12.11667] (Laurent 1964a:68; Ceriaco

et al. 2016a:57); “Rio Curoca in the Pediva Hot Springs area” [-16.28359, 12.56106] (Ceríaco et al. 2016a:32); “Namibe Regional-naNatural Park” [-15.77386, 12.33306] (Ceríaco et al. 2016a:32).

Taxonomic and distributional notes:

None.



MAP 222. Distribution of *Trachylepis hoeschi* in Angola.

***Trachylepis cf. lacertiformis* (Peters, 1854)**

BRONZE ROCK SKINK

Euprepes lacertiformis Peters 1854:618. Syntypes: ZMB 5523 (4 specimens) (collector W.C.H. Peters), lost *fide* Bauer et al. (2003). Type locality: “Boror” [Mozambique], considered in error for “Tete,” Mozambique *fide* Broadley (1975a).

Mabuya lacertiformis: Broadley (1975a:12, 2000:101), Branch (1998:154).

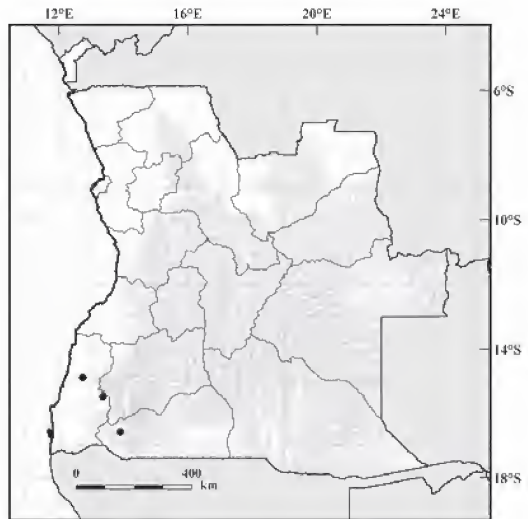
Trachylepis lacertiformis: Broadley (2004:324), Broadley and Maritz (2010b), Portik and Bauer (2012:128), Ceríaco et al. (2016a:57).

Global conservation status (IUCN): Least Concern.

Global distribution: The species occurs from the southern end of Malawi Lake through the Tete District of Mozambique into eastern Zimbabwe and westwards along the Zambezi. The Angolan population is disjunct.

Ocurrences in Angola (Map 223): The species occurs in an isolated population in southwestern Angola in Nambie and Cunene Province, near the Namibian border. **Namibe:** “Cainde, Mossamedes” [-15.48333, 13.36667] (Broadley 1975a:12; Ceríaco et al. 2016a:57); “14 km NE of Caraculo, Mossamedes” [-14.90214, 12.74229] (Broadley 1975a:12; Ceríaco et al. 2016a:57). **Cunene:** “Otchinjau, Huíla” [-16.57903, 13.90516] (Broadley 1975a:12).

Taxonomic and distributional notes: *Trachylepis lacertiformis* has frequently been confused with other species, particularly *Trachylepis varia* (Peters, 1867) (Broadley 1975). The status of the Angolan population with respect to supposed conspecifics in southeast Africa requires further investigation.



MAP 223. Distribution of *Trachylepis cf. lacertiformis* in Angola.

Trachylepis laevis* (Boulenger, 1907)*ANGOLAN BLUE-TAILED SKINK**

Mabuia laevis Boulenger 1907a:212. Holotype: BMNH 1946.8.15.31 (formerly BMNH 06.8.24.71) (collector W.J. Ansorge). Type locality: “Maconjo, Benguela” [= Fazenda Mucungo], Namibe Province, Angola.

Mabuya laevis: Hellmich (1957b:54), Laurent (1964a:76), Branch (1998:155).

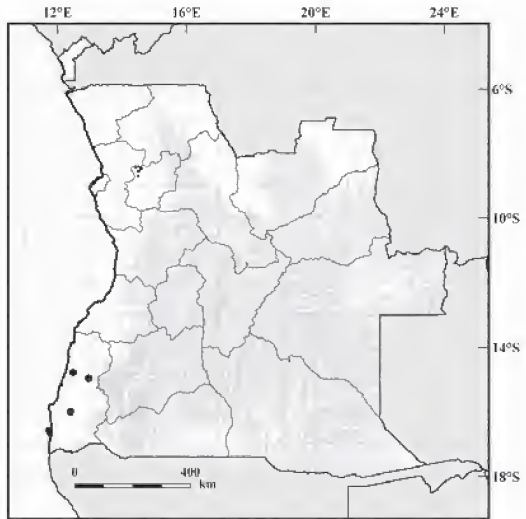
Trachylepis laevis: Ceriaco et al. (2016a:33, 57).

Global conservation status (IUCN): Not Evaluated.

Global distribution: This species inhabits in large rock cracks in granite outcrops, from the Kaokoveld of northern Namibia and Southern Angola.

Occurrences in Angola (Map 224): The species occurs in southern Angola, in desert areas. **Kwanza Norte:** “Piri-Dembos (record questionable)” [-8.56667, 14.50000] (Hellmich 1957b:54). **Namibe:** “Munhino 50 km west Sá da Bandeira” [-14.96667, 12.96667] (Laurent 1964a:76; Ceriaco et al. 2016a:57); “Maconjo (= Fazenda Mucungo)” [-14.782192, 12.486557] (Boulenger 1907a:212; Ceriaco et al. 2016a: 57); “Iona National Park, north of Tambor” [-15.99642, 12.40711] (Ceriaco et al. 2016a:33).

Taxonomic and distributional notes: Hellmich (1957b) cited this species from “Piri-Dembos,” which is significantly further north than the type locality. Laurent (1964a) cited another specimen from Namibe Province and also expressed doubt about the validity of Hellmich’s specimen. The “Piri-Dembos” record is highly improbable and surely represents a misidentification, although it is not clear to which species it might actually belong.



MAP 224. Distribution of *Trachylepis laevis* in Angola.

Trachylepis maculilabris* (Gray, 1845)*SPECKLED-LIPPED SKINK**

Euprepes maculilabris Gray 1845:114. Holotype: BMNH 1946.8.18.17 (formerly BMNH xv.109a) (collector W. Raddon). Type locality: “W. Africa” [= West Africa].

Euprepes notabilis Peters 1879:36. Syntypes: ZMB 9204 (collector A. von. Homeyer), 8485 (collector J.G. Falkenstein) lost *vide* Bauer et al. (1995, 2003). Type locality: “Chinchoxo,” [Cabinda Province] (ZMB 8485) and “Pungo Andongo,” [Malanje Province, Angola] (ZMB 9204).

Euprepes Anchietae Bocage 1886a:44 (*nomen nudum*), 1866b:62. Holotype: MBL specimen number unknown. (collector J.A. d’Anchieta) destroyed by fire 18 March 1978. Type locality: “Zaire” [= Zaire Province], Angola.

Euprepes (Eupr.) Perrotetii: Peters (1877a:614), Bocage (1895a:39).

Mabuia maculilabris: Boulenger (1887:164), Bocage (1895a:40), Ferreira (1906:170).

Mabuya maculilabris: Loveridge (1933:12), Parker (1936:138), Laurent (1950a:12, 1954a:65), Broadley (2000:94), Bauer et al. (2003:275).

Mabuya maculilabris maculilabris: Hellmich (1957a:61), Loveridge (1957:209), Laurent (1964a:65).

Euprepes notabilis: Bauer et al. (2003:275).

Euprepes maculilabris: Mausfeld et al. (2004:160).

Trachylepis maculilabris: Trape et al. (2012:398), Ceriaco et al. (2014b:671), Branch and Conradie (2015:200).

Global conservation status (IUCN): Not Evaluated.

Global distribution: This species has a wide distribution in sub-Saharan Africa from Liberia to the Horn of Africa southwards as far as Angola in the west and Mozambique in the east. It is a human commensal and may expand its range as habitats are modified.

Occurrences in Angola (Map 225): The species is widely distributed in the northern regions of the country and is represented by scattered records in the south. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:614, 1879:36; Bocage 1895a:39; Loveridge 1957:209; Bauer et al. 2003:275); “Cabinda” [-5.55000, 12.18333] (Bocage 1895a:40); 1957:209 **Bengo:** “Ambriz” [-7.844312, 13.106493] (Boulenger 1887:164; Bocage 1895a:40; Loveridge 1933:312). **Luanda:** “Quifangondo” [-8.76667, 13.43333] (Ceriaco et al. 2014b:671). **Kwanza Norte:** “Golungo” [-9.13333, 14.76667] (Ferreira 1906:170); “Cambondo” [-9.15963, 14.65771] (Ferreira:1906:170; Loveridge 1947:179); “Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:61); “Dondo (Quanza edges)” [-9.68333, 14.43333] (Bocage 1895a:40).

Malanje: “Pungo-Andongo” [-9.66667, 15.58333] (Peters 1879:36; Bocage 1895a:39, 40; Loveridge 1957:209; Bauer et al. (2003:275); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014:671). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:12, 1954a:65, 1964a:65); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:12); “Carumbo, Lucapa” [-8.42278, 20.73917] (Branch and Conradie 2000:200). **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:65). **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:138); “Congulu” [-10.86667, 14.28333] (Parker 1936:138). **Benguela:** “Entre Rios, Chiviti-di” [-13.01667, 14.63333] (Hellmich 1957a:61).

Taxonomic and distributional notes: Mausfeld et al. (2004) noted that *Trachylepis maculilabris* (Gray, 1845) may comprise at least two distinct species, one from West Africa representing the nominotypic *maculilabris*, and other from East Africa representing a cryptic species. Ongoing research suggests that this is an underestimate and that the complex may contain many species. Bocage (1866a) introduced the name *Euprepes anchietae* as a *nomen nudum*, but a valid description appeared in a second paper (Bocage 1866b) in the the same issue of the journal. Peters (1877a) originally referred one of the types of *E. notabilis* to *E. perottetii* Duméril and Bibron, 1839 and although Peters (1879) revised his identification, this correction was not noted by Bocage (1895a).

Trachylepis cf. *megalura* (Peters, 1878)

GRASS-TOP SKINK

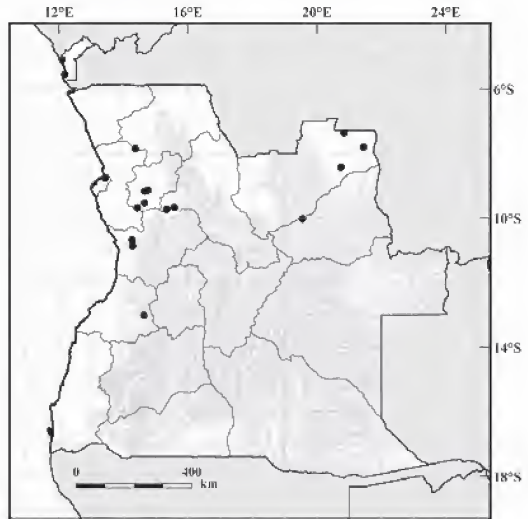
Euprepes (Mabuia) megalurus Peters 1878:204, pl. 2, fig. 4. Syntypes: ZMB 9281 (2 specimens), 9304 (collector J. M. Hildebrandt). Type locality: “Taita” [= Kenya].

Mabuia megalura subsp.: Laurent (1964a:74).

Trachylepis cf. *megalura*: Ceriaco et al. (2016b:71).

Global conservation status (IUCN): Not Evaluated.

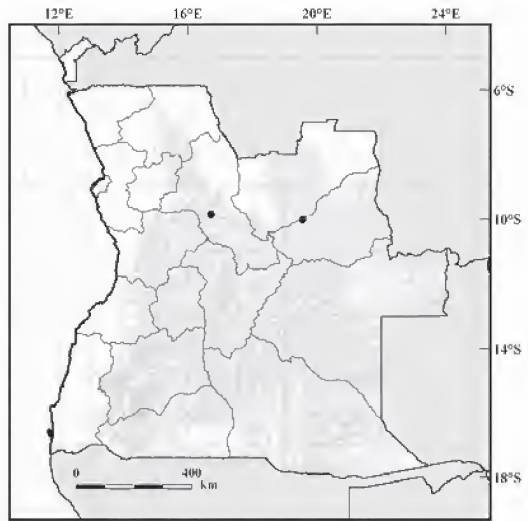
Global distribution: The species is known from Ethiopia south to Mozambique and west to the southern Democratic Republic of Congo and northern Angola.



MAP 225. Distribution of *Trachylepis maculilabris* in Angola.

Occurrences in Angola (Map 226): The species has only been recorded from northeastern Angola. **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:74). **Malanje:** “Cangandala National Park” [-9.84606, 16.72233] (Ceríaco et al. 2016b:71).

Taxonomic and distributional notes: According to Laurent (1964a) the two specimens from “Alto Cuílo” differ from the specimens of *Mabuya megalura* (Peters, 1878) (= *Trachylepis megalura*) from East Africa and around Lake Kivu and probably represent an undescribed “angolo-katangaise” variety or new species. Recently collected specimens from Cangandala National Park, Malanje Province (Ceríaco et al. 2016b) appear to be conspecific with Laurent’s material and further studies are now in progress.



MAP 226. Distribution of *Trachylepis* cf. *megalura* in Angola.

***Trachylepis monardi* nom. nov. Marques, Ceríaco, Blackburn and Bauer MONARD’S SKINK (Endemic)**

Mabuia striata angolensis Monard 1937b:89. Syntypes: MHNC 91.0599-0613 [15 specimens], MHNG 858.95 (collector A. Monard). Type locality: “Kuvangu” [= Cuvango], Huíla Province and “Bimbi” [=Bimbe] Huambo Province, Angola.

Mabuya striata angolensis: Mahnert (1976:488), Ortiz (1989:56).

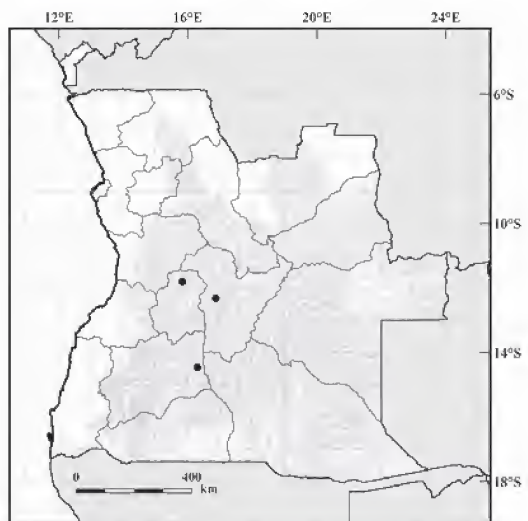
Mabuya angolensis: Laurent (1964a:72).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known only from Angola.

Occurrences in Angola (Map 227): The species occurs mainly in the central-west Angola. **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:89; Mahnert 1976:488; Ortiz 1989:56). **Bié:** “Silva Porto” [-12.33333, 16.86667] (Laurent 1964a:72). **Huíla:** “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:89; Mahnert 1976:488; Ortiz 1989:56).

Taxonomic and distributional notes: Monard (1937b) described *Mabuia striata angolensis* perhaps unaware of Bocage’s (1872) *Euprepis angolensis*, a name that has been largely neglected or sometimes subsequently synonymized with *Mabuya striata angolensis*, however, its identity remains uncertain. Both Boulenger (1887) and Bocage (1895a) treated it as a synonym of *Euprepes varia* Peters, 1867, and we include the relevant



MAP 227. Distribution of *Trachylepis monardi* in Angola.

material under that account. As both names are currently placed in the same genus Monard's name is a junior secondary homonym of Bocage's. As such Bocage's name, despite being a junior subjective synonym of *Trachylepis varia*, must retain the epithet *angolensis*, and Monard's name requires a replacement (the special conditions of Article 23.9 do not apply as an insufficient number of citations by an insufficient number of authors have used Monard's name). As no junior synonyms are known to exist for *Trachylepis angolensis* (Monard, 1937) we propose *Trachylepis monardi* nom. nov. as a replacement name, in recognition of the contributions of Albert Monard (2 September 1886 – 27 September 1952), Swiss naturalist from La Chaux-de-Fonds, who undertook two major expeditions to Angola and left a legacy of specimens and published papers relating to the zoology of not only Angola, but also Cameroon, Guinea-Bissau and North Africa. Monard (1937b) noted 26 syntypes in the type series. Fifteen of these remain in La Chaux-de-Fonds. Ortiz (1989) cited MHNN (Muséum d'histoire naturelle de Neuchâtel) 2130 as the lectotype, giving both localities "Kuvangu" and "Bimbi". The MHNC specimens thus are paralectotypes, as is the single Geneva "paratype" cited by Mahnert (1976) and Schätti and Perret (1997), for which the locality is also uncertain. Monard typically dispersed specimens to the many Swiss institutions that helped sponsor his field work, including high schools. It is likely that the "missing" nine specimens were or are in such small collections.

Trachylepis occidentalis (Peters, 1867)

WESTERN THREE-STRIPED SKINK

Euprepes vittatus var. *australis* Peters 1862a:19. Syntypes: ZMB 4212, 64401–02 (formerly ZMB 4212A–B) (collector C.H. Hahn). Type locality: "Neu-Barmen" [= Gross Barmen, Otjozondjupa Region] Namibia by implication *vide* Bauer et al. (1995, 2003).

Euprepes occidentalis Peters 1867:20, replacement name for *E. v. australis* Peters 1862, preoccupied by *Euprepes australis* Gray, 1838 [= *Ctenotus australis* (Gray, 1838 "1839")].

Euprepes occidentalis: Bocage (1870:68).

Mabuya occidentalis: Bocage (1895a:42).

Mabuya occidentalis: Laurent (1964a:73), Branch (1998:156), Broadley (2000:97).

Trachylepis occidentalis: Bates et al. (2014:263), Ceriaco et al. (2016a:33, 57).

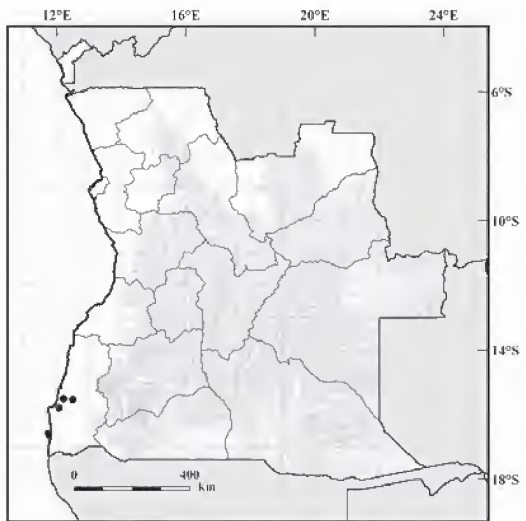
Global conservation status (IUCN): Not Evaluated.

Global distribution: Distributed from arid western South Africa and southwestern Botswana through Namibia to arid areas of southwestern Angola.

Occurrences in Angola (Map 228): The species distribution is limited to the desert regions in Namibe Province. **Namibe:** "Mossâmedes desert, 35 km south from the city" [-15.50575, 12.20768] (Laurent 1964a:73; Ceriaco et al. 2016a:57); "Rio Coroca" [-15.78333, 12.06667] (Bocage 1895a:42; Ceriaco et al. 2016a:57); "Pico Azevedo" [-15.53400, 12.49197] (Ceriaco et al. 2016a:33).

Taxonomic and distributional notes:

Bauer et al. (2003) also included ZMB 4213, MNHN 1468 (see Brygoo 1985), and BMNH



MAP 228. Distribution of *Trachylepis occidentalis* in Angola.

67.6.14.1 among the putative syntypes, although they noted that only three specimens could be types as Peters was explicit about the number of specimens he had. The original ZMB catalogue notes in Peters' hand both that ZMB 4212 corresponds to the types and that there were three specimens under this number ZMB 4212A and B reported by Bauer et al. (1995, 2003) have since been renumbered. Thus only ZMB specimens have status as types.

***Trachylepis punctulata* (Bocage, 1872)**

SPECKLED SAND SKINK

Euprepes punctulatus Bocage 1872:76. Syntypes: MBL 742 (2 specimens) (collector J.A. d'Ancheita), destroyed by fire 18 March 1978. Type locality: "Rio Coroca, dans le littoral au sud de Mossamedes" [= Rio Coroca, Namibe Province, Angola].

Mabuia punctulata: Boulenger (1887:204), Bocage (1895a:44, 1897a:195).

Mabuya punctulata: Schmidt (1933:12), Frade (1963:253), Broadley (2000:100).

Mabuya longiloba longiloba: Laurent (1964a:73).

Mabuya variegata punctulata: Broadley (1975a:7), Branch (1998:158).

Trachylepis punctulata: Portik (2009:136), Portik and Bauer (2012:128), Bates et al. (2014:264), Ceriaco et al. (2016a:31, 57).

Global conservation status (IUCN): Not Evaluated.

Global distribution: Widely distributed across the Kalahari and adjacent regions of Southern Africa, with several extensions eastwards in central South Africa and Mozambique and reaching its northern extent in southwestern Angola with an isolated record in western Zambia (Broadley 1975a; Branch 1998).

Occurrences in Angola (Map 229): The

species occurs in southwestern Angola. **Huíla:**

"15 km north Quilengues" [-13.95256,

14.04704] (Laurent 1964a:73). **Namibe:** "Ina-

mangando River on Lucira Road" [-14.05000,

12.38333] (Broadley 1975a:11; Ceriaco et al.

2016a:57); "Mucungu" [-14.78333, 12.48333]

(Schmidt 1933:12; Broadley 1975:11; Ceriaco

et al. 2016a:57); "Sao Nicolau, Mossamedes"

[-14.26667, 12.36667] (Broadley 1975a:11;

Ceriaco et al. 2016a:57); "17 km N of Sao

Nicolau" [-14.12714, 12.37577] (Broadley

1975a:11; Ceriaco et al. 2016a:57); "Caraculo"

[-15.01667, 12.66667] (Broadley 1975a:11;

Ceriaco et al. 2016a:57); "15 km W of Caracu-

lo" [-15.02039, 12.50489] (Broadley 1975a:11;

Ceriaco et al. 2016a:57); "Cima" [-15.06667,

12.15000] (Broadley 1975a:11; Ceriaco et al.

2016a:57); "Pico Acezevedo" [-15.55000,

12.51667] (Broadley 1975:11); "23 km W of Virei" [-15.66907, 12.74847] (Broadley 1975a:11;

Ceriaco et al. 2016a:57); "Rio Coroca" [-15.78333, 12.06667] (Bocage 1872:76, 1895a:44,

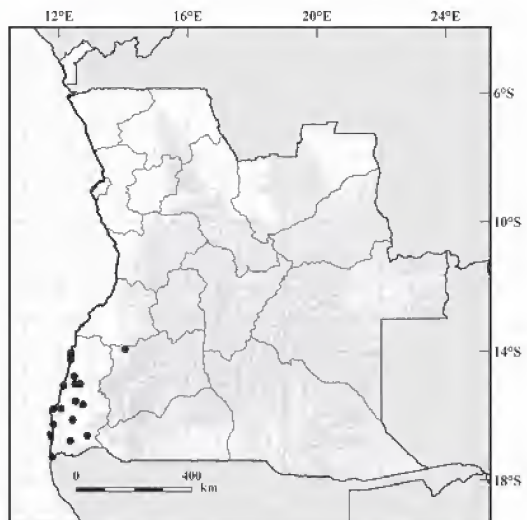
1897a:195; Boulenger 1887:204; Broadley 1975a:11, 2000:100; Ceriaco et al. 2016a:57); "6 km S

of Rio Coroca on Iona road" [-15.78333, 12.06667] (Broadley 1975a:11, 2000:100; Ceriaco et al.

2016a:57); "Porto Alexandre" [-15.80000, 11.83333] (Broadley 1975a:11); "30 km N of Tambor"

[-16.13556, 12.42972] (Broadley 1975:11; Ceriaco et al. 2016a:57); "Octchinfengo River on

Onocua road, Iona Reserve" [-16.61667, 12.88333] (Broadley 1975a:11; Ceriaco et al. 2016a:57);



MAP 229. Distribution of *Trachylepis punctulata* in Angola.

“Foz de Cunene” [-17.28333, 11.80000] (Broadley 1975:11; Ceriaco et al. 2016a:57); “Espinheira” [-16.78906, 12.35756] (Ceriaco et al. 2016a:31); “Namibe-Lubango road, road marker 59, 1.8 km west (by road) of Caraculo, on the north side of the road” [-15.01531, 12.64244] (Ceriaco et al. 2016a:31); “Praia do Navio coastal dunes, ca 124 km SSW of Namibe” [-16.27233, 11.83164] (Ceriaco et al. 2016a:31). **Undetermined Locality:** “Mossamedes to Benguela” (Broadley 1975a:11).

Taxonomic and distributional notes: This species was long considered as a subspecies of *T. variegata* (Peters, 1870) following Broadley (1975a, 2000). Based on morphological differences outlined in these papers and a high level of molecular divergence, these two taxa are now treated as full species (Portik 2009; Portik and Bauer 2012; Bates et al. 2014). The monophyly of *T. punctulata* is relatively poorly supported and further revisionary work may support the recognition of additional taxa within this taxon as currently construed (Portik and Bauer 2012). Broadley (1975a) remarked that populations of *T. punctulata* from the Northern Cape Province, Botswana, Rhodesia, Zambia and Mozambique differ in several morphological characters from populations in Angola and Namibia, and that the eastern populations may ultimately deserve taxonomic recognition. The results obtained by Portik and Bauer (2012) partially support this division, although they found evidence for the Northern Cape Province sample clustering with samples of *T. punctulata* from Namibia (Portik and Bauer 2012, Bates et al. 2014). The presence of a record from Kalabo, Zambia (Broadley 1971, 1975a) close to the eastern border of Angola suggests that further field-work may eventually yield *T. punctulata*, or a superficially similar taxon, from Moxico or Cuando Cubango.

Trachylepis spilogaster (Peters, 1882)

KALAHARI TREE SKINK

Euprepes (*Euprepis*) *striatus* var. *spilogaster* Peters 1882:68. Type: Not located *vide* Bauer et al. (1995:63, 2003:307). Type locality: “Bei Otjimbingwe im Hererolande (Westafrika)” (Peters 1882:68), [= Otjimbingwe, Erongo Region], Namibia.

Mabuya striata spilogaster: Laurent (1964a:71).

Mabuya spilogaster: Branch (1998:156).

Mabuya spilogaster: Broadley (2000:105).

Trachylepis spilogaster: Bates et al. (2014:265).

Trachylepis cf. *spilogaster*: Conradie et al. (2016:25).

Global conservation status (IUCN): Not Evaluated.

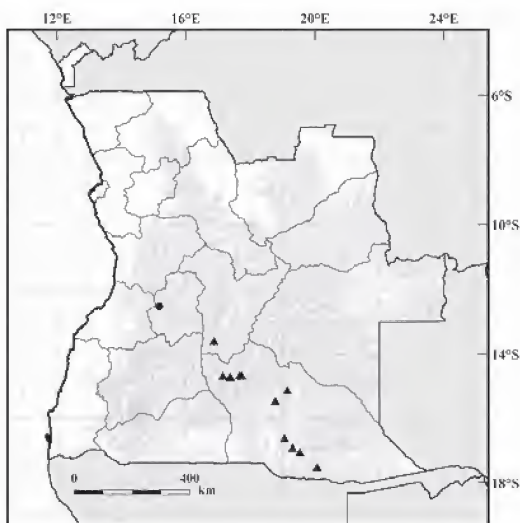
Global distribution: This species extends from the Kalahari of northwestern South Africa and southwestern Botswana, through the length of Namibia to southwest Angola.

Ocurrences in Angola (Map 230): The only published record for this species is from “Serra do Moco” in Huambo Province, although museum specimens from southeastern provinces exist. These latter are treated separately as *Trachylepis* aff. *spilogaster* and marked with a triangle in the map. ***Trachylepis spilogaster* (plotted as circles).** **Huambo:** “Serra do Moco, Luimbale” [-12.53333, 15.18333] (Laurent 1964a:71). ***Trachylepis* aff. *spilogaster* (plotted as triangles).** **Bié:** “Cubango basin (12b)” [-13.59638, 16.87722] (Conradie et al. 2016:8-9, 25). **Quando Cubango:** “Cubango basin (6a)” [-14.67155, 17.73525] (Conradie et al. 2016:25); “Cubango basin (20)” [-14.67175, 17.15331] (Conradie et al. 2016:8-9, 25); “Cuito basin (25)” [-15.13919, 19.14350] (Conradie et al. 2016:8-9, 25); “Cuito basin (30a)” [-16.90980, 19.30769] (Conradie et al. 2016:9-10, 25); “Cuito basin (35)” [-16.62322, 19.05352] (Conradie et al. 2016:9-10, 25); “Cuito basin (32)” [-17.04880, 19.53333] (Conradie et al. 2016:9-10, 25); “Cubango basin (49)” [-14.66300, 17.66550] (Conradie et al. 2016:9, 12, 25); “Cuito basin (57)” [-15.45969, 18.76833] (Conradie et al. 2016:9, 12, 25); “Cuito basin (62)” [-17.50875, 20.06608] (Conradie et al. 2016:9,

12, 25); “Cubango basin (47)” [-14.70214, 17.37806] (Conradie et al. 2016:25).

Taxonomic and distributional notes:

Previously considered as a subspecies of *T. striata* (Peters, 1844), Branch (1998), Broadley (2000) and all subsequent authors have considered this species specifically distinct. Conradie et al. (2016) published numerous records of *T. aff. spilogaster* from Cuando Cubango. We think it is highly unlikely that these records refer to the same lineage as true *T. spilogaster*. The true affinities of this population will require a comprehensive revision of the *Trachylepis* of Angola.



MAP 230. Distribution of *Trachylepis spilogaster* (circle) and *T. aff. spilogaster* (triangles) in Angola.

***Trachylepis sulcata* (Peters, 1867)**

WESTERN ROCK SKINK

Euprepes olivaceus Peters 1862a:21. Syntypes: ZMB 4209, 4210, 64329–30 (formerly ZMB 4210 part), 64346–47 (formerly ZMB 4209), MNHN 1470 (collector C. H. Hahn). Type locality: “Neu-Barmen” [= Gross Barmen, Otjozondjupa Region] Namibia.

Euprepes sulcatus Peters 1867a:20, replacement name for *E. olivaceus* Peters, 1862 which is preoccupied by *E. olivaceus* Gray, 1839 [= *Dasia olivacea* (Gray, 1839)].

Mabuia Ansorgii Boulenger 1907a:213. Holotype: BMNH 1946.8.3.33 (formerly BMNH 1906.8.24.62) (collector W.J. Ansorge). Type locality: “Caconda, Benguela,” Huíla Province, Angola.

Euprepes olivaceus: Bocage (1970:68).

Mabuia sulcata: Bocage (1895a:41, 1896a:111).

Mabuia sulcata ansorgii: Monard (1937b:90), Mertens (1938a:438), Hellmich (1957a:64), Laurent (1964a:74).

Mabuia bocagi ansorgei: Laurent (1947:8).

Mabuya sulcata ansorgii: Branch (1998:157).

Mabuya sulcata: Broadley (2000:102).

Trachylepis sulcata: Portik (2009:23), Portik et al. (2010:147), Protik et al. (2011:1745), Ceriaco et al. (2016a:34, 57).

Trachylepis sulcata ansorgii: Portik (2009:23), Portik et al. (2010:147), Protik et al. (2011:1745), Bates et al. (2014:267).

Global conservation status (IUCN): Not Evaluated.

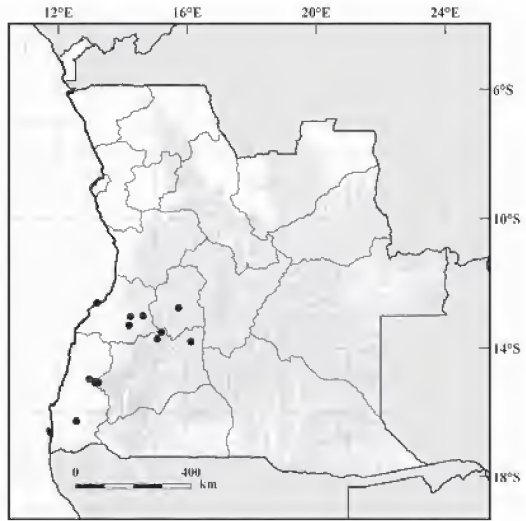
Global distribution: The species extends from the Western Cape Province of South Africa, through most of Namibia except the northeast to the southwestern quadrant of Angola.

Ocurrences in Angola (Map 231): The species occurs in southwestern Angola. **Huambo:** “Nova Lisboa” [-12.76667, 15.73333] (Hellmich 1957a:64). **Benguela:** “Farta bay” [-12.60000, 13.20000] (Laurent 1947:8); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:64); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:438), “Hanha” [-13.30000, 14.20000] (Bocage 1896a:111). **Huíla:** “Rio Cuce” [-13.51667, 15.20000] (Bocage 1895a:41) “Caconda” [-13.73333, 15.06667] (Boulenger 1907:213; Laurent 1947:8); “Sangevé” [-13.80000, 16.11667] (Monard 1937b:90; Laurent 1947:8). **Namibe:** “Munhino 50 km à l’ouest de Sá da Bandeira,

district de Moçâmedes” [-14.96667, 12.96667] (Laurent 1964a:74; Ceriaco et al. 2016a:57); “Campangombe” [-15.10000, 13.15000] (Bocage 1895a:41; Ceriaco et al. 2016a:57); “Tona National Park, Rio Curoca in Pediva Hot Springs area” [-16.28359, 12.56106] (Ceriaco et al. 2016a:34); “Leba Pass” [-15.07003, 13.24339] (Ceriaco et al. 2016a:34); “Namibe-Lubango road, 2 km east (by road) of Mangueiras, south side of the road” [-15.04464, 13.15861] (Ceriaco et al. 2016a:34).

Taxonomic and distributional notes:

Three subspecies of this species have been recognized: the nominate form, *Trachylepis s. ansorgii* (Boulenger, 1907) and *T. s. nigra* (Werner, 1915) (Portik 2009; Portik et al. 2010, 2011; Bates et al. 2014). *Trachylepis sulcata nigra* has been synonymized with the typical form but the taxonomic status of *T. s. ansorgii* remains uncertain (Portik et al. 2010, 2011). Ostensibly *T. s. ansorgii* is diagnosable by a larger snout-vent length and larger head size (Branch 1998; Portik 2009; Bates et al. 2014). The geographic limit of *ansorgii* is unclear. Branch (1998) depicted both it and *T. s. sulcata* as occurring parapatrically in northwestern Namibia, but no concerted effort has been made to determine if there are actually two taxa in Angola and adjacent Namibia or, if there are, where their boundaries lie. Preliminary molecular phylogenetic results suggest that there is significant structure within Angolan populations, but the taxonomic status of these cannot yet be assessed. We here treat all Angolan material *T. sulcata* pending further study.



MAP 231. Distribution of *Trachylepis sulcata* in Angola.

***Trachylepis wahlbergii* (Peters, “1869” 1870)**

WAHLBERG’S STRIPED SKINK

Euprepes Wahlbergii (Peters “1869” 1870:661). Lectotype: ZMB 6155 (collector J.A. Wahlberg) designated by implication by Boulenger (1887). Type locality: “Damaraland” Namibia. NHR 2190 is the paralectotype and has the same data as the lectotype.

Euprepes punctatissimus: Bocage (1866a:44, 1870:68).

Mabuia striata: Bocage (1895a:41, 1896a:111, 1897b:211), Boulenger (1905:111), Angel (1923:160), Schmidt (1933:12), Monard (1937b:88), Themido (1941:8).

Mabuia striata: Parker (1936:136).

Mabuia striata striata: Manaças (1963:235).

Mabuia striata wahlbergii: Branch and McCartney (1992:1), Branch (1998:157), Broadley (2000:106).

Trachylepis wahlbergii: Branch and Conradie (2015:200), Conradie et al. (2016:26).

Trachylepis striata: Ceriaco et al. (2016b:69).

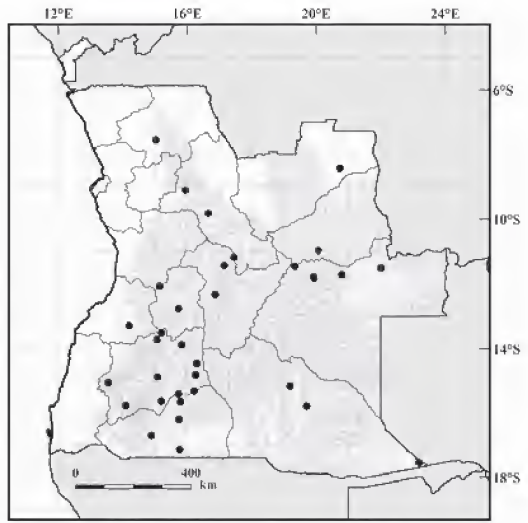
Global conservation status (IUCN): Not Evaluated.

Global distribution: A widespread species in southern Africa, from Malawi, western Mozambique, northern and western Zimbabwe and northern Botswana through Zambia and parts of the former Katanga region of the Democratic Republic of Congo to most of Namibia and Angola.

Occurrences in Angola (Map 232): Widely distributed across Angola, although apparently absent from the forested far north and the arid far southwest. **Uíge:** “Fazenda Otilia, Encoge” [-7.55000, 15.03333] (Manaças 1963:235). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:44, 1895a:41); “Cangandala National Park” [-9.81858, 16.65403] (Ceriaco et al.

2016b:69). **Lunda Norte**: “Lucapa” [-8.42278, 20.73917] (Branch and Conradie 2015:200). **Lunda Sul**: “Lunda” [-10.96667, 20.06667] (Monard 1937b:88); “Mutianvo” [-11.45000, 19.33333] (Themido 1941:8). **Moxico**: “Lago Dilolo” [-11.50000, 22.01667] (Manaças 1963:235); “Lago Cameia” [-11.71667, 20.80000] (Manaças 1963:235); “Fazenda Santa Curz, Luso” [-11.78333, 19.91667] (Manaças 1963:235); “Calombe-Luso” [-11.83333, 19.93333] (Manaças 1963:235). **Bié**: “Gauca” [-11.18333, 17.45000] (Schmidt 1933:12); “Silva Porto” [-12.33333, 16.86667] (Manaças 1963:235); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:12). **Huambo**: “Galanga” [-12.06667, 15.15000] (Bocage 1895a:41); “Nova Lisboa” [-12.76667, 15.73333] (Manaças 1963:235). **Benguela**: “Hanha” [-13.30000, 14.20000] (Bocage 1896a:111, 1897b:211). **Huíla**: “Rio Cuce” [-13.51667, 15.20000] (Bocage 1895a:41); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:41); “Sangevé” [-13.88333, 15.83333] (Monard 1937b:88); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:88); “Indungu” [-14.81667, 16.26667] (Monard 1937b:88); “Kapelongo” [-14.88333, 15.08333] (Monard 1937b:88); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:41; Angel 1923:160); “Kambisa” [-15.31667, 16.21667] (Monard 1937b:88); “Kului” [-15.41667, 15.73333] (Monard 1937b:88); “Molundo” [-15.63333, 15.20000] (Monard 1937b:88); “Gambos” [-15.76667, 14.10000] (Bocage 1895a:41). **Cunene**: “Kuvelai” [-15.65000, 15.80000] (Monard 1937b:88); “Humbe/Humbi” [-16.68333, 14.90000] (Bocage 1895a:41; Monard 1937b:88); “Mupa” [-16.18333, 15.75000] (Monard 1937b:88); “Mupanda” [-17.13333, 15.76667] (Monard 1937b:88). **Cuando Cubango**: “Kwito region, tributary of Kubango” [-15.16667, 19.18333] (Angel 1923:160); “Vicinity of Cuito Cuanavale - approximately 75 km W of Mavinga” [-15.78333, 19.70000] (Branch and McCartney 1992:1); “Cuando basin (43a)” [-17.53500, 23.18916] (Conradie et al. 2016:9-10, 26). **Undetermined locality**: “Rio Quando” [-12.58333, 13.41667] (Bocage 1895a:41); “Between Benguela and Bihé” (Boulenger 1905:111).

Taxonomic and distributional notes: *Trachylepis wahlbergii* was long considered a subspecies of *T. striata* (Peters, 1844) (e.g., Broadley 1977a; Branch 1998), but following Broadley (2000), the former subspecies in this complex have been treated as full species. However, Castiglia et al. (2006) provided a molecular data analyses that suggested that *T. striata* and *T. wahlbergii* may not be reciprocally monophyletic. All records in the *T. striata* complex from across Namibia are assignable to *T. wahlbergii* as are all records from western Zambia. It would seem likely, therefore that members in this group in Angola would also be assignable to this taxon. Color patterns of Angolan members of the group are variable and some specimen do at least superficially resemble true *T. striata*. However, it is probable on biogeographic grounds that most or all older Angolan literature records of “*T. striata*” are, in fact, referable to *T. wahlbergii*, or perhaps to another species, but not to *T. striata sensu stricto*. Nonetheless, only in recent years have newly collected specimens been assigned to *T. wahlbergii* at the outset, e.g., specimens from near Mavinga (Branch and McCarthy 1992), and from Lunda Norte Province (Branch and Conradie 2015), and recently in Malanje Province (M. Marques pers. obs), in the the Laúca Dam area. Further research is needed



MAP 232. Distribution of *Trachylepis wahlbergii* in Angola.

to determine definitively if *T. wahlbergi* and *T. striata* are specifically distinct and if all Angolan specimens are referable to the former. Pending the outcome of such research, we here tentatively treat all “*striata*” records as *T. wahlbergii*.

Genus *Typhlacontias* Bocage, 1873

Typhlacontias johnsonii Andersson, 1916

JOHNSON’S BURROWING SKINK

Typhlacontias johnsonii Andersson 1916. Lectotype: GNM Re. Ex. 1388a (collector D. F. d’Azinhaes), designated by Haacke (1997:142). Type locality: “Port Alexander, Portuguese West Africa” [= Tômbua] Namibe Province, Angola.

Typhlacontias punctatissimus: Bocage (1895a:56), Monard (1937b:86).

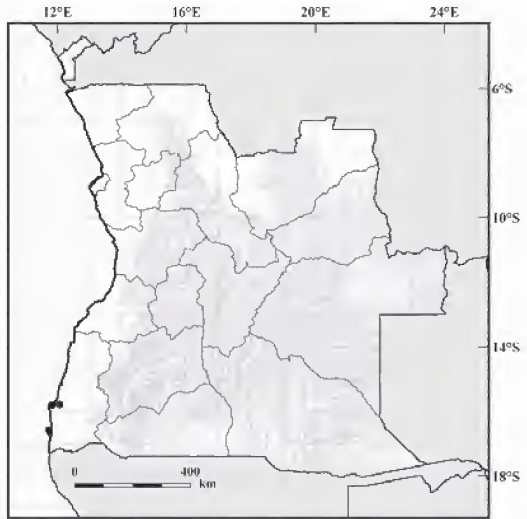
Typhlacontias johnsonii: Haacke (1997:142), Branch (1998:146), Ceriaco et al. (2016a:58).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and Namibia.

Occurrences in Angola (Map 233): The species is restricted to the Namibe desert. **Namibe:** “Rio Coroca” [-15.78333, 12.06667] (Bocage 1895a:56; Monard 1937b:86; Haacke 1997:144; Ceriaco et al. 2016a:58); “Porto Alexandre (= Tombua)” [-15.80000, 11.83333] (Andersson 1916:19; Haacke 1997:144; Ceriaco et al. 2016a:58); “Lacrau” (Haacke 1997:144; Ceriaco et al. 2016a:58).

Taxonomic and distributional notes: Bocage’s (1895a) *Typhlacontias punctatissimus* Bocage, 1873 from “Coroca” was probably referable to this species (Haacke 1997), but it was destroyed in the fire at the Museu Bocage.



MAP 233. Distribution of *Typhlacontias johnsonii* in Angola.

Typhlacontias punctatissimus punctatissimus Bocage, 1873

DOTTED BLIND DART SKINK

Typhlacontias punctatissimus Bocage 1873b:213. Syntypes: MBL (2 specimens) catalogue numbers unknown (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Rio Curoca,” Namibe Province, Angola.

Typhlacontias punctatissimus: Bocage (1887b:203, 1897a:197), Boulenger (1887:429), de Witte and Laurent (1943:34), Frade (1963:252-253), Branch (1998:146).

Typhlacontias punctatissimus punctatissimus: Haacke (1997:146), Ceriaco et al. (2016b:58).

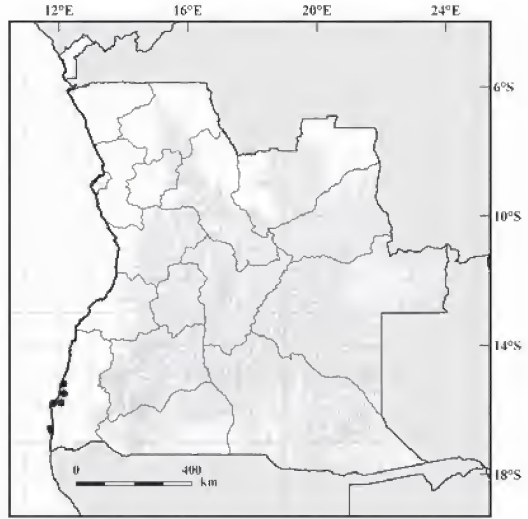
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and northern Namibia.

Occurrences in Angola (Map 234): Restricted to the Namibe Province. **Namibe:** “Mossamedes” [-15.20000, 12.15000] (Boulenger 1887:429; Haacke 1997:150; Ceriaco et al. 2016a:58); “Mossâmedes desert, 35 km south from the city” [-15.50000, 12.16667] (Laurent 1964a:82; Ceriaco et al. 2016a:58); “Rio Coroca” [-15.78333, 12.06667] (Bocage 1873b:213, 1887b:203, 1897a:197; Ceriaco et al. 2016a:58); “Porto Alexandre (=Tombua)” [-15.80000, 11.83333] (Haacke 1997:147; Ceriaco et al. 2016a:58).

Taxonomic and distributional notes:

The nomenclatural history of *T. punctatissimus* and its subspecies was reviewed by Haacke (1997), who validated the existence of two sympatric subspecies in southern Angola (thus suggesting that they should both be accorded specific status – see account below).



MAP 234. Distribution of *Typhlacontias punctatissimus punctatissimus* in Angola.

***Typhlacontias punctatissimus bogerti* Laurent, 1964 BOGERT'S DOTTED BLIND DART SKINK
(Endemic)**

Typhlacontias bogerti (Laurent 1964a:82). Holotype: MD 1946 (collector A. Barros Machado). Type locality: “Désert de Moçâmedes, 35 km au sud de la ville” [= Namibe desert, 35 km south of the village of Namibe] Namibe Province, Angola.

Typhlacontias bogerti: Haacke (1965:22).

Typhlacontias punctatissimus bogerti: Haacke (1997:150).

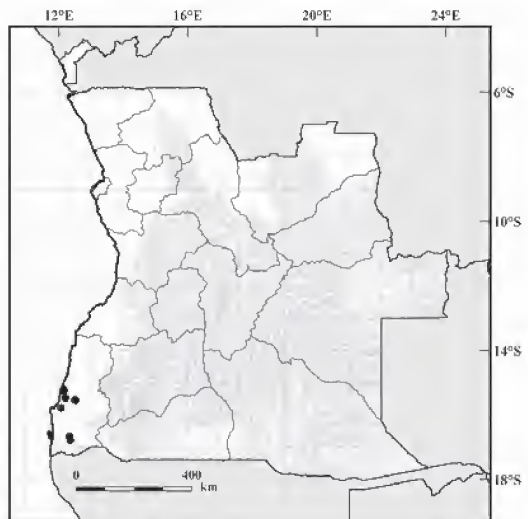
Typhlacontias punctatissimus bogerti: Branch (1998:147), Ceriaco et al. (2016a:30, 58).

Global conservation status (IUCN): Not Evaluated.

Global distribution: Known only from southwestern Angola.

Ocurrences in Angola (Map 235):

Restricted to the Namibe Province. **Namibe: (Map 240)** “Mossamedes (= Namibé)” [-15.20000, 12.15000] (Haacke 1965:22, 1997:150; Ceriaco et al. 2016b:58); “10 km S of Moçâmedes (=Namibé)” [-15.269404, 12.164081] (Haacke 1997:150; Ceriaco et al. 2016b:58); “34 km S of Moçâmedes (=Namibé)” [-15.478951, 12.203563] (Haacke 1997:150; Ceriaco et al. 2016b:58); “Pico Azevedo” [-15.53400, 12.49197] (Ceriaco et al. 2016b:31); “8 km of SE of Pico Azevedo” [-15.55000, 12.51667] (Haacke 1997:150); “Rio Coroca” [-15.78333, 12.06667] (Haacke 1997:150; Ceriaco et al. 2016b:58); Ceriaco et al. 2016b:58; “Kakolo windmill, Iona National Park” [-16.66667, 12.33333] (Haacke



MAP 235. Distribution of *Typhlacontias punctatissimus bogerti* in Angola.

1997:150; Ceríaco et al. 2016b:58); “Espinheira” [-16.78528, 12.35468] (Ceríaco et al. 2016b:31).

Taxonomic and distributional notes: *Typhlacontias p. bogerti* appears to be endemic to Angola, restricted to northern Namib Desert in Iona Park west of the Coroca Sand Sea and south of the town of Namibe (Haacke 1965, 1997; Branch 1998).

Typhlacontias rohani Angel, 1923

ROHAN’S BLIND DART SKINK

Typhlacontias Rohani (Angel 1923:162, figs. 6–8. Holotype: MHNP 1923.1 (collector J. de Rohan-Chabot).

Type locality: “Lwankundu, sous-affluent du Kwāndo” [= Cuando Cubango Province, sub-tributary of Cuando River], Angola.

Typhlacontias rohani: Monard (1937b:96), de Witte and Laurent (1943:35), Guibé (1954:102), Brygoo (1985:92), Haacke (1997:152), Broadley (2006:557), Conradie et al. (2016:26).

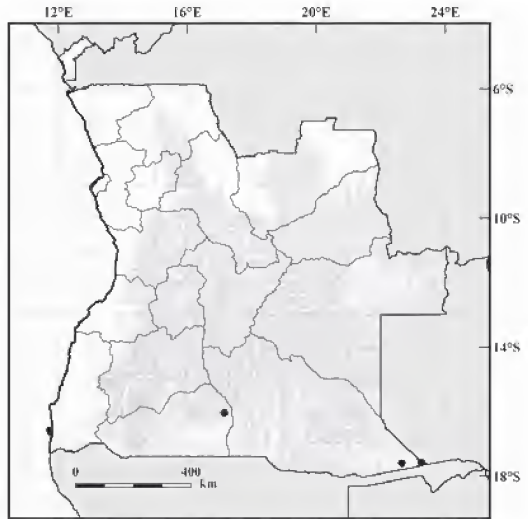
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is limited to the Kalahari sand regions of southeastern Angola, northwestern Namibia, northern Botswana, western Zimbabwe and southern Zambia.

Ocurrences in Angola (Map 236): In Angola known only from the southeastern part of the country. **Cunene:** “Chimporo” [-16.03333, 17.15000] (Monard 1937b:96). **Cuando Cubango:** “Lwankundu River, sub-tributary of Kwando” (Angel 1923:164; Brygoo 1985:92; Haacke 1997:152); “Cuando basin (38)” [-17.58830, 22.65694] (Conradie et al. 2016:9-10, 26); “Cuando basin (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9-10, 26).

Taxonomic and distributional notes:

Guibé (1954) incorrectly listed “Huilla” as the type locality, without justification (Brygoo 1985).



MAP 236. Distribution of *Typhlacontias rohani* in Angola.

Typhlacontias rudebecki Haacke, 1997

RUDEBECK’S BLIND DART SKINK (Endemic)

Typhlacontias rudebecki Haacke 1997:155, fig. 5. Holotype: TM 25465 (collector G. Rudebeck). Type locality: “São Nicolau, Moçâmedes [= Namibe] district, Angola (1412Ad).”

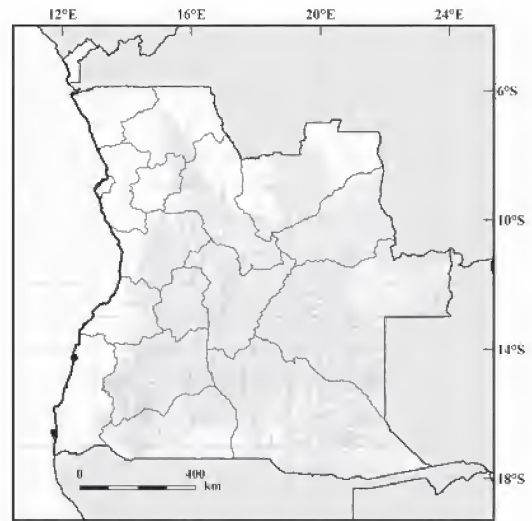
Typhlacontias rudebecki: Ceríaco et al. (2016a:58).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Ocurrences in Angola (Map 237): The species is only known from the type locality. **Namibe:** “São Nicolau, Moçâmedes [= Namibe]” [-14.26667, 12.36667] (Haacke 1997:155; Ceríaco et al. 2016a:58).

Taxonomic and distributional notes: This species was described by Haacke (1997) based on a single specimen from “São Nicolau, Moçâmedes [= Namibe]” collected by G. Rudebeck. According to the original description this species is closer to *Typhlacontias rohani* Angel, 1923 and *Typhlacontias gracillis* Roux, 1907, than to the Namib species, however, its general proportions differ and its habitat, although not explicitly recorded, is coastal Namib Desert.



MAP 237. Distribution of *Typhlacontias rudebecki* in Angola.

Family Varanidae Hardwicke and Gray, 1824

Genus *Varanus* Merrem, 1820

Varanus albigularis albigularis (Daudin, 1802)

WHITE-THROATED MONITOR

[Although we consider the two Angolan subspecies of *V. albigularis* to be potentially valid we believe that it is not possible to meaningfully assign many locality records to one or the other. Thus we provide the occurrences in Angola and taxonomic and distributional notes for the two combined.]

Tupinambis albigularis Daudin 1802 [An X]:72, pl. XXXII. Holotype: MNHN 6513 (collector unknown) *vide* Brygoo (1987). Type locality: “de l’Afrique ou de l’Inde.”

Varanus ocellatus: Bocage (1867b:220; 1870:68).

Varanus albigularis: Bocage (1895a:27), Monard (1931:92), Themido (1941:7), Bayless (2002:1645).

Varanus exanthematicus: Ferreira (1903:16), Themido (1941), Manaças (“1955” 1957:190), Frade (1963:252).

Varanus exanthematicus albigularis: Mertens (1926:152), Monard (1937b:63).

Varanus albigularis albigularis: Ceriaco et al. (2016a:58).

Global conservation status (IUCN): Least Concern.

Global distribution: Southern Africa from Angola and Tanzania southwards.

Varanus albigularis angolensis Schmidt, 1933

ANGOLAN WHITE-THROATED MONITOR

Varanus albigularis angolensis (Schmidt 1933:10, pl. II). Holotype: CM 5967 (collectors R. and L. Boulton). Type locality: “Gauca, Bihe,” Bié Province, Angola.

Varanus albigularis angolensis: Loveridge (1936a:59), McCoy and Richmond (1966:157), Bayless (2002:1645), Ceriaco et al. (2014b:671), Ceriaco et al. (2016a:39, 58).

Varanus exanthematicus angolensis: Mertens (1937a:9), Mertens (1938a:437), Laurent (1964a:48, 1964b:3), McCoy and Richmond (1966:157).

Varanus (Empagusa) exanthematicus angolensis: Mertens (1942a:104), Mertens (1942b:194), Mertens (1942c:359).

Varanus exanthematicus: Manaças (“1955” 1957:192).

Global conservation status (IUCN): Least Concern.

Global distribution: This subspecies is known from northern Angola and adjacent Zambia and the Katanga region of the Democratic Republic of Congo.

Ocurrences in Angola (Map 238):

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1964a:48; Bayless 2002:1661).

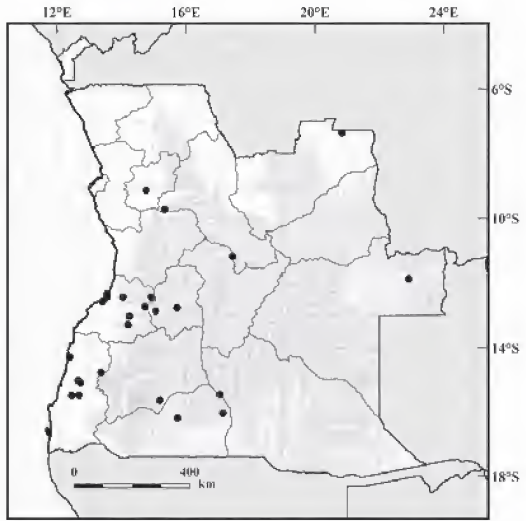
Kwanza Norte: “Golungo” [-9.13333, 14.76667] (Ferreira 1903:16; Monard 1937b:63; Mertens 1942c:359, 360; Manaças “1955” 1957:192).

Malanje: “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014a:671). **Moxico:** “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:48; Laurent 1946b:48). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1933:10; Loveridge 1936:59; Mertens 1942c:359; McCoy and Richmond 1966:157; Bayless 2002:1661).

Huambo: “High-Huambo” [-12.76667, 15.73333] (Mertens 1926:152, 1937a:9, 1938a:437, 1926:152, 1942a:104, 1942b:194, 210, 216, 1942c:359, 360; Bayless 2002:1661).

Benguela: “Cuma” [-12.86667, 15.06667]

(Bayless 2002:1661); “Lobito bay” [-12.35000, 13.55000] (Bocage 1895a:27; Mertens 1942c:359; Laurent 1964b:3-4; Bayless 2002:1662); “Catumbella” [-12.43333, 13.55000] (Bocage 1895a:27; Mertens 1926:152, 1942a:104, 1942b:194, 216, 1942c:359, 360; Bayless 2002:1661); “Catumbella-Coporello” [-13.93333, 12.9666] (Mertens 1926:152, 1942c:359; Bayless 2002:1661); “Coporello” [-13.93333, 12.9666] (Mertens 1926:152; Bayless 2002:1661); “Quissange” [-12.43333, 14.05000] (Frade 1963:253; Mertens 1942c:359; Bayless 2002:1662); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:27; Mertens 1942c:359; Bayless 2002:1662); “Benguella” [-12.58333, 13.41667] (Bocage 1867c:220, 1895:27; Themido 1941:7, 8; Mertens 1942c:359; Manaças “1955” 1957:192; Bayless 2002:1661); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:63; Mertens 1942c:360; Bayless 2002:1661); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:437, 1942c:360; Bayless 2002:1661). “Hanha” [-13.30000, 14.20000] (Bayless 2002:1661). **Huíla:** “Molundo” [-15.63333, 15.20000] (Monard 1937b:63; Mertens 1942c:360; Bayless 2002:1662). **Namibe:** “Rio Chimba” [-14.30000, 12.40000] (Bocage 1895a:27; Mertens 1942c:359; Bayless 2002:1661); “Biballa” [-14.76667, 13.36667] (Bocage 1895a:27; Mertens 1926:152, 1942c:359; Bayless 2002:1661); “7.5 km, NW (by road) of Pico Azevedo” [-15.47600, 12.69000] (Ceriaco et al. 2016a:39); “Caraculo” [-15.01667, 12.66667] (Bayless 2002:1661); “Chiyaka district” [vic. -15.08333, 12.73333] (Bayless 2002:1661); “Luciro-Inamangando road” [Undetermined Locality] (Bayless 2002:1662); “7.5 km NW (by road) of Pico Azevedo, adult, found in a rock crevice” [-15.47600, 12.46150] (Ceriaco et al. 2016a:39). **Cunene:** “Mupa” [-16.18333, 15.75000] (Monard 1937b:63; Mertens 1942c:360; Bayless 2002:1662); “Chimporo” [-16.03333, 17.15000] (Monard 1931:92, 1937b:63; Mertens 1942c:359, 360; Bayless 2002:1661). **Cuando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1931:92, 1937b:63; Mertens 1942c:360; Bayless 2002:1661). “Kubango” (Monard 1931:92; Mertens 1942c:359; Bayless 2002:1662). **Undetermined localities:** “Xangongo, 30 km SEE” (Bayless 2002:1662); “Cazuindo” (Mertens 1942c:359; Bayless 2002:1661).



MAP 238. Distribution of *Varanus albigularis* sbsp. in Angola.

Taxonomic and distributional notes: The species was long included within the synonymy of the savanna Monitor, *Varanus exanthematicus* (Bosc 1792), now considered limited to the north of the equatorial African forest belt (Bayless 2002). The subspecies *angolensis* was rejected by Broadley and Howell (1991), although it has been considered valid by many more recent authors (e.g., Branch 1998; Bayless 2002; Bates et al. 2014). The allocation of specimens from some Angolan localities to the nominotypical form appears to reflect their referral by earlier authors, rather than a critical assessment. Phillips (2004) regarded *V. a. angolensis* to be present throughout Angola. Pending a more thorough evaluation of the species in Angola we have not attempted to distinguish records of the two subspecies.

Varanus niloticus (Linnaeus, 1758)

NILE MONITOR

Lacerta monitor Linnaeus 1758:201, *nomen rejectum* (ICZN, Opinion 540, 1959). Syntypes: Specimens figured in Seba (1734, pl. 94, figs. 1–2; 1735, pl. 82, fig. 2, pl. 105, fig. 1), and described by Linnaeus (1754:41) (collectors unknown), presumed lost. Type locality: “in Indiis.” [= India].

Lacerta nilotica Linnaeus 1766:369. Holotype: Specimen mentioned by Hasselquist (1757) (collector F. Hasselquist), presumed lost. Type locality: “in Ægypto” [= Egypt].

Varanus niloticus: Bocage (1866a:42, 1867b:220, 1895a:26, 1897b:210), Ferreira (1900a:50), Boulenger (1905:110), Manaças (“1955” 1957:192).

Monitor niloticus: Günther (1865a:480).

Monitor saurus: Bocage (1879b:95, 1887a:178), Peters (1877a:613)

Varanus niloticus: Bocage (1897b:210), Ferreira (1900a:50, 1903:15), Boulenger (1905:110), Monard (1937b:63), Mertens (1938a:436), Ceriaco et al. (2014b:671), Ceriaco et al. (2016b:87), Conradie et al. (2016:26), Dowell et al. (2016:594).

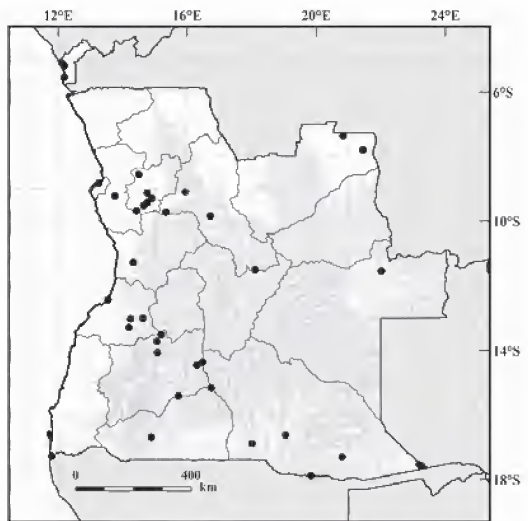
Varanus (Polydaedalus) niloticus: Mertens (1942a:94, 1942c:321).

Varanus niloticus niloticus: Laurent (1950a:12; 1954a:63; 1964a:47), Hellmich (1957a:60; 1957b:69), Manaças (1963:239).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Senegal, west to Somalia and Egypt, and south to South Africa.

Occurrences in Angola (Map 239): The species distribution comprises the entire country including Cabinda Province, with exception of the desert regions of far southwestern Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:613); “Rio Quilo” [-5.18333, 12.18333] (Bocage 1866a:42, 1895a:26; Mertens 1942c:323; Manaças “1955” 1957:193; Bayless 2002:1676); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:42, 1895a:26; Mertens 1942c:323; Manaças “1955” 1957:193; Bayless 2002:1675). **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1866a:42, 1895a:26; Mertens 1942c:323; Manaças “1955” 1957:193). **Bengo:** “Cunga River” [-9.23333, 13.76667] (Boulenger 1905:110; Mertens 1942c:321, 323; Bayless 2002:1675). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hell-



MAP 239. Distribution of *Varanus niloticus* in Angola.

mich 1957b:60); “Golungo Alto” [-9.13333, 14.76667] (Ferreira 1903:15; Mertens 1942c:321; Manaças “1955” 1957:193); “N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1903:15; Mertens 1942c:321, 323; Bayless 2002:); “Rio Membege River, perto de N’dalla Tando” [-9.43333, 14.76667] (Ferreira 1900a:50; Mertens 1942c:321; Manaças “1955” 1957:193; Bayless 2002:1675); “Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:61); “Dondo” [-9.68333, 14.43333] (Bocage 1895a:26; Mertens 1942c:323; Manaças “1955” 1957:193; Bayless 2002:1675). **Malanje**: “Duque de Bragança (Duque do Cunene [Bayless])” [-9.10000, 15.95000] (Bocage 1895a:26; Mertens 1942c:323; Manaças “1955” 1957:193; Bayless 2002:1675); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:671); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:87); “Rio Loando” [-11.55000, 22.01667] (Bocage 1879a:95; Mertens 1942c:323; Bayless 2002:1675). **Lunda Norte**: “Dundo” [-7.36667, 20.83333] (Laurent 1954a:63, 1964a:47; Manaças “1955” 1957:193); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950:12). **Moxico**: “Lago Dilolo” [-11.50000, 18.10000] (Manaças 1963:239). **Kwanza Sul**: “Condo” [-11.28333, 14.33333] (Günther 1865a:480; Mertens 1942c:323; Bayless 2002:1675). **Benguela**: “Catumbella (Catumbinda river [Bayless 2002])” [-12.43333, 13.55000] (Bocage 1867b:220, 1895a:26; Mertens 1942c:323; Manaças “1955” 1957:193; Bayless 2002:1675); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:69); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:436; Mertens 1942a:94, 95; Mertens 1942c:324; Bayless 2002:1675); “Hanha” [-13.30000, 14.20000] (Bocage 1897b:210; Mertens 1942c:323; Manaças “1955” 1957:193; Bayless 2002:1675). **Huíla**: “Rio Cuce” [-13.51667, 15.20000] (Bocage 1895a:26; Mertens 1942c:323; Bayless 2002:1675); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:26; Mertens 1942c:323; Bayless 2002:1675); “Quillangues” [-14.06667, 15.08333] (Bocage 1895a:26; Mertens 1942c:323; Bayless 2002:1675); “Tyitunda” [-14.36667, 16.48333] (Monard 1937b:63; Mertens 1942c:322, 323; Bayless 2002:1676); “Vila da Ponte (= Kuvangu (Kubangu))” [-14.46667, 16.30000] (Monard 1931:93, 1937b:63; Mertens 1942c:322, 32; Manaças “1955” 1957:193; Bayless 2002:1675); “Kului” [-15.41667, 15.73333] (Monard 1937b:63; Mertens 1942c:323; Bayless 2002:1675). **Cunene**: “Riv. Mbalé” [-15.16667, 16.75000] (Monard 1931:93, 1937b:63; Mertens 1942c:322, 323; Manaças 1957 “1955”:193); “Humbe” [-16.68333, 14.90000] (Bocage 1895a:26; Mertens 1942c:323; Bayless 2002:1675); “Foz de Cunene” [-17.28333, 11.80000] (Bayless 2002:1675); “Sighting near Cunéné” (Monard 1937b:63; Mertens 1942c:323; Bayless 2002:1675). **Cuando Cubango**: “Cunga” [-17.30000, 20.80000] (Dowell et al. 2016:594); “Cuito basin (29)” [-17.87291, 19.83333] (Conradie et al. 2016:8-9, 26); “Cuito basin (35) not collected” [-16.62322, 19.05352] (Conradie et al. 2016:9-10, 26); “Cuando basin (43) not collected” [-17.53500, 23.18916] (Conradie et al. 2016:9-10, 26); “Cuando basin (44a) not collected” [-17.57333, 23.26000] (Conradie et al. 2016:9-10, 26); “Cubango basin (45) not collected” [-16.88350, 18.01180] (Conradie et al. 2016:9, 12, 26). **Undetermined Locality**: Rio Quanza” (Bocage 1895a:26; Mertens 1942c:323); “Mayumba” (Manaças “1955” 1957:193); “Rio Quango” (Bocage 1895a:26; Mertens 1942c:323; Manaças “1955” 1957:193; Bayless 2002:1675); “Kubango Gebiet” (Mertens 1942c:322).

Taxonomic and distributional notes: The name *Lacerta monitor* Linnaeus, 1758 initially associated with this and other species of varanids, was rejected by the ICZN under Opinion 540 and *Lacerta nilotica*, based on a specimen described by Hasselquist (1757) is the accepted name. *Varanus niloticus* comprises three major clades of monitors, with the sole Angolan sample included clustering with a very broadly distributed southern clade, also including virtually all samples south of 3°N (Dowell et al. 2016). This includes those specimens in this geographic range that had previously been assigned to *Varanus ornatus* (Daudin, 1803) which had been elevated to full specific status by Böhme and Ziegler (1997) based on external features, particularly color.

Family Chamaeleonidae Gray, 1825

Genus *Chamaeleo* Laurenti, 1768

Chamaeleo anchietae Bocage, 1872

ANCHIETA'S CHAMELEON

Chamaeleon Anchietae Bocage 1872:72, fig. p. 72. Syntypes: MBL (originally 5 specimens) catalogue numbers unknown (collector J.A. d'Anchieta), destroyed by fire 18 March 1978; Bauer et al. (2006:270) identified ZMB 7756 as a surviving syntype, exchanged from Bocage to Wilhelm Peters. Type locality: "Huilla, dans l'intérieur de Mossamedes" (Bocage 1872:72), [= Huíla], Huíla Province, Angola.

Chamaeleo anchietae: Boulenger (1887:452), Tilbury and Tolley (2009:63).

Chamaeleon Anchietae: Bocage (1895a:62, 1897a:198),

Chamaeleon anchietae: Loveridge (1933:333), Frade (1963:252).

Chamaeleo senegalensis anchietae: Loveridge (1957:198).

Chamaeleo anchietae: Broadley and Cotterill (2004:40), Bauer et al. (2006:270), Tilbury (2010:447), Ceriaco et al. (2016a:58).

Global conservation status (IUCN): Least Concern.

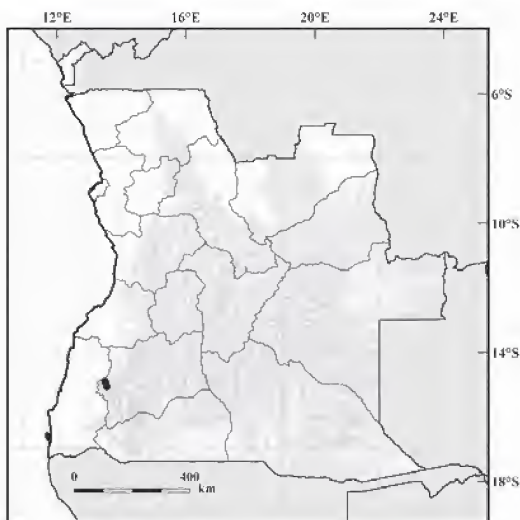
Global distribution: The species occurs from the interior plateaus to montane grasslands in southwestern Angola through the former Katanga Province of the Democratic Republic of Congo and the Albertine Rift to southwestern Tanzania and Namibe.

Occurrences in Angola (Map 240): The species is known from southwestern Angola.

Huíla: "Lobango" [-14.91667, 13.50000] (Bocage 1895a:62, 1897a:198); "Huilla" [-15.05000, 13.55000] (Bocage 1872:72, 1895a:62, 1897a:198; Loveridge 1933:333, 1957:198; Bauer et al. 2006:270). **Namibe:** "Namibe" (Tilbury 2010:451; Ceriaco et al. 2016a:58).

Taxonomic and distributional notes:

Based on Bocage's (1872) somewhat ambiguous locality Boulenger (1887) wrongly considered the terra typica to be "Mossamedes, South-west Africa." Bocage (1895a) restated the locality simply as "Huilla".



MAP 240. Distribution of *Chamaeleo anchietae* in Angola.

Chamaeleo dilepis quilensis Bocage, 1886

QUILO FLAP-NECK CHAMELEON

Chamaeleon Dilepis Leach 1819:493. Holotype: BMNH 1946.8.13.75 (formerly BMNH 25.5a) (presented by T.E. Bowditch). Type locality: Not stated. "French Congo [= Congo]" *vide* Klaver and Böhme (1987).

Chamaeleo Capellii (Bocage 1866a:42, 1866c:59). Holotype: MBL specimen number unknown (collector A. Capello), destroyed by fire 18 March 1978. Type locality: "Benguela," Benguela Province, Angola.

Chamaeleo dilepis var. *quilensis* Bocage 1866c:59. Holotype: MBL specimen number unknown (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: "Rio Quilo," Angola.

Chamaeleon dilepis: Bocage (1866a:42, 1866c:59, 1867b:219, 1870:68, 1895a:59, 1896a:112), Peters (1887:612), Boulenger (1887:450, 1905:112), Monard (1937b:99), Themido (1941:8).

Chamaeleo dilepis: Bocage (1879c:88, 1887a:178, 1887b:202, 1887c:209).

Chamaeleon parvilobus: Boulenger (1887:449).

Chamaeleon quilensis: Bocage (1895a:60, 1897a:198).

Chamaeleon quilensis: Boulenger (1905:112), Monard (1937b:99).

Chamaeleo dilepis quilensis: Angel (1923:165), Loveridge (1933:331, 1957:199), Glaw (2015:201).

Chamaeleo dilepis: Schmidt (1933:12), Mertens (1937a:7, 1938a:435), Parker (1936:141), Manaças (1963:231), Branch and Conradie (2015:200).

Chamaeleo dilepis dilepis: Loveridge (1936a:76, 1957:199), Laurent (1950a:12, 1954a:65, 1964a:44), Hellmich (1957a:52, 1957b:53), Chirio and LeBreton (2007:182), Glaw (2015:200).

Chamaeleo quilensis: Laurent (1954a:65, 1964a:44), Chirio and LeBreton (2007:198).

Chamaeleo dilepis "quilensis": Tilbury (2010:495).

Chamaeleo dilepis: Tolley (2014), Ceriaco et al. (2016a:58), Ceriaco et al. (2016b:73), Conradie et al. (2016:24).

Global conservation status (IUCN): Least Concern.

Global distribution: The species as a whole is widely distributed throughout southern and eastern Africa, although the limits of its range in some areas are under dispute. There is general agreement that the distribution includes the area from Congo east to Tanzania, Kenya, Somalia and Ethiopia, and south to South Africa. However, records from Gabon and north and from Uganda have been questioned (Chirio and Ineich 2006; Pauwels and Vande weghe 2008), and it may be difficult to distinguish this taxon from its near relative *C. gracilis*, with which it is sympatric in parts of Central Africa.

Ocurrences in Angola (Map 241):

Chamaeleo dilepis quilensis is widely distributed across the entire country.

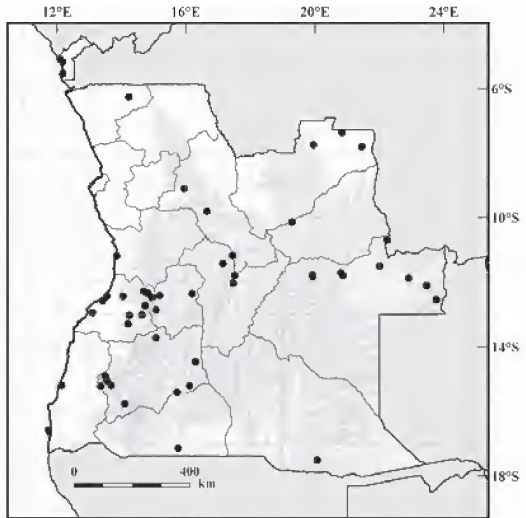
Cabinda: “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:612); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:42, 1866c:59, 1895a:59); Rio Quilo” [-5.18333, 12.18333] (Bocage 1866a:42, 1866b:59, 1895a:60, 1897a:198; Loveridge 1933:331, 1957:199; Chirio and LeBreton 2007:198).

Zaire: “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:178, 1895a:59; 1897a:198).

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1950a:12; 1954a:65); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:12; 1954a:65); “Carumbo” [-7.74172, 19.95467] (Branch and Conradie 2015:200).

Lunda Sul: “Cacolo (Minungo)” [-10.15000, 19.28333] (Manaças 1963:231).

Moxico: “Lago Dilolo” [-11.50000, 22.01667] (Manaças 1963:231); “Teixeira de Sousa, distr. Villa Luso” [-10.70000, 22.23333] (Mertens 1937:8); “Lago Cameia” [-11.71667, 20.80000] (Manaças 1963:231); “Fazenda Santa Cruz, Luso” [-11.78333, 19.91667] (Manaças 1963:231); “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1963:231); “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:44); “Calunda” [-12.11667, 23.46667] (Laurent 1964a:44); “Macondo” [-12.55000, 23.76667] (Laurent 1964a:44); “Cazombo” [-11.88333, 22.91667] (Laurent 1954a:65). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1895a:59); “Cangandala National Park” [-9.81858, 16.65403] (Ceriaco et al. 2016b:73). **Kwanza Sul:** “Novo Redondo” [-11.20000, 13.85000] (Bocage 1867b:219, 1895a:59). **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1933:12); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:12); “General Machado (= Camacupa)” [-12.03333, 17.46667] (Mertens 1937a:7); “Farm Goedecke on Conjo, 25 km north of General Machado (= Camacupa)” [-11.798563, 17.5114] (Mertens 1937a:6;



MAP 241. Distribution of *Chamaeleo dilepis quilensis* in Angola.

Loveridge 1947:208). **Huambo**: “Bela-Vista (= Sanguengue)” [-12.36667, 16.20000] (Hellmich 1957b:53); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:141); “Cuma” [-12.86667, 15.06667] (Loveridge 1936a:76). **Benguela**: “Quibula” [-12.28333, 14.68333] (Bocage 1895a:59); “Cahata” [-12.35000, 14.81667] (Bocage 1895a:59); “Catumbella” [-12.43333, 13.55000] (Bocage 1867b:219); “Quissange” [-12.43333, 14.05000] (Bocage 1887b:209, 1895:59); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:59); “Benguella” [-12.58333, 13.41667] (Bocage 1866a:42, 1866c:59, 1867b:219, 1895a:59-60; Loveridge 1957:200); “Dombe” [-12.95000, 13.10000] (Bocage 1867b:219, 1895a:60); “Entre Rios/Chitidi” [-13.01667, 14.63333] (Mertens 1938a:435, Hellmich 1957a:52); “Cubal” [-13.03333, 14.25000] (Mertens 1937a:7, 1938a:435; Hellmich 1957b:53); “Marco de Canavezes, perto da barragem do rio Cubal” [-13.30000, 14.20000] (Bocage 1896a:112); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:112); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:99). **Huíla**: “Caconda” [-13.73333, 15.06667] (Bocage 1879c:88; Loveridge 1936a:76); “Lubango” [-14.91667, 13.50000] (Bocage 1895a:59); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:59); “Mutundo” [-15.23333, 13.36667] (Frade 1963:231); “Gambos” [-15.76667, 14.10000] (Bocage 1895a:59); “Kampulu, environs de Kasinga” [-15.21667, 16.11667] (Monard 1937b:99); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:99); “Kulur” [-15.41667, 15.73333] (Monard 1937b:99). **Namibe**: “Mossamedes” [-15.20000, 12.15000] (Bocage 1867b:219, 1887b:202, 1895a:59; Boulenger 1887:451; Ceriaco et al. 2016a:58); “Chimba” [-15.20000, 13.68333] (Hellmich 1957b:53; Ceriaco et al. 2016a:58). **Cunene**: “Mupanda” [-17.13333, 15.76667] (Monard 1937b:99). **Cuando Cubango**: “Lwankundu, sub-tributary of Kwando” [Undetermined Locality] (Angel 1923:165); “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:9-10, 24). **Undetermined locality**: “Between Bihé and Quilenges” (Boulenger 1905:112); “Mayumba/Maiumba” (Bocage 1887a:178, 1895a:60, 1897a:198); “Cuanza r.” (Boulenger 1905:112). **Without precise locality**: “with no precise locality” (Laurent 1964a:44).

Taxonomic and distributional notes: Bocage (1866a) noted some distinct characters in a specimen collected by Anchieta in “Rio Quilo” relative to the typical form, *Chamaeleo dilepis* Leach, 1819, however, variation across the *C. dilepis* species complex as a whole suggests that there are few if any consistent differences among these forms and the taxonomy of the *C. dilepis* complex remains unresolved (Glaw 2015). The issue is exacerbated by the vague type locality of *C. dilepis*, “Congo,” which, in the BMNH register is given as “Gaboon, French Congo” (although Pauwels and Vande weghe 2008) stated that the species is absent from Gabon). Loveridge (1936a) referred all Angolan specimens from the Field Museum to *C. d. quilensis*, with the exception of one specimen from “Cuma,” which he regarded as typical *dilepis* (FMNH 15365). Broadley (1966) and Tilbury (2010) considered *quilensis* a variant of the polymorphic *C. dilepis*, although Klaver and Böhme (1986) and Ullenbruch et al. (2007) identified differences in hemipenial morphology and regarded *quilensis* as subspecifically (Klaver and Böhme 1987) or even specifically distinct from nominotypical *C. dilepis* (Klaver and Böhme 1986). Tilbury (2010) provided an extended discussion of the taxonomic and distributional issues surrounding the *C. dilepis* complex. Regardless if *quilensis* is taxonomically distinct from *C. dilepis sensu stricto*, it seems likely that all members of the complex form Angola are referable to the same form (although some authors have assigned some Angolan material to another doubtful form, *C. d. roperi*) and we here treat all Angolan specimens as *C. d. quilensis* pending a more detailed phylogeographic study of the group.

Chamaeleo gracilis etiennei* Schmidt, 1919*ETIENNE'S GRACEFUL CHAMAELEON**

Chamaeleo gracilis Hallowell 1842:324, pl. 18. Holotype: ANSP 7325 ("purchased by the Rev. Charles Eden of Monrovia, of one of the African natives"). Type locality: "Liberia, Western Africa."

Chamaeleon etiennei Schmidt 1919:574. Holotype: AMNH 11370 (collector H. Lang). Type locality: "hills near Banana at the mouth of the Congo," Democratic Republic of Congo.

Chamaeleon gracilis: Bocage (1866a:41, 1867b:219, 1895a:61), Ferreira (1900a:50, 1903:16, 1904:117), Boulenger (1887:448, 1905:111), Monard (1937b:98), Themido (1941:8)

Chamaeleon senegalensis: Bocage (1870:68), Peters (1881:147).

Chamaeleon gracilis: Boulenger (1887:448, 1905:111), Bocage (1895a:61).

Chamaeleo senegalensis: Günther (1865a:480).

Chamaeleon etiennei: Parker (1936:140), Laurent (1964a:42).

Chamaeleo gracilis: Hellmich (1957a:53, 1957b:53), Laurent (1964a:44).

Chamaeleo gracilis gracilis: Loveridge (1957:198).

Chamaeleo gracilis etiennei: Loveridge (1957:197).

Chamaeleo senegalensis senegalensis: Loveridge (1957:197).

Chamaeleon gracilis etiennei: Tilbury (2010:507), Ceriaco et al. (2014b:670), Glaw (2015:202)

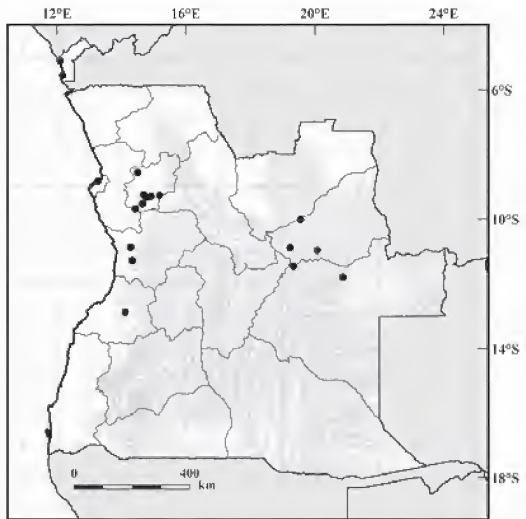
Global conservation status (IUCN): Least Concern.

Global distribution: Known from the southern Congo to northern Angola

Occurrences in Angola (Map 242): Limited to areas from Kwanza Sul and Lunda Sul northwards, including Cabinda. Although we located no published historical records from Lunda Norte, Tilbury (2010) plotted them there, and it is likely that they occur in this province as well as the immediately adjacent Democratic Republic of Congo. **Cabinda:**

"Chinchoxo" [-5.10000, 12.10000] (Peters 1877a:612; 1881:147; Bocage 1895a:61); "Cabinda" [-5.55000, 12.18333] (Bocage 1895a:61). **Lunda Sul:** "Alto Cuílo" [-10.01667, 19.55000] (Laurent 1964a:42); "Alto Chicapa" [-10.88333, 19.23333] (Laurent 1964a:42). **Luanda:** "Loanda" [-8.83333, 13.26667] (Bocage 1867b:219). **Kwanza Norte:** "Piri-Dembos" [-8.56667, 14.50000] (Hellmich 1957b:53); "Ambaca" [-9.26667, 15.18333] (Bocage 1895a:61); "N'Dalla

Tando" [-9.30000, 14.91667] (Ferreira 1904:111); "Cazengo" [-9.33333, 14.76667] (Ferreira 1903:16); "Mucoso" [-9.53333, 14.65000] (Hellmich 1957a:53); "Dondo" [-9.68333, 14.43333] (Bocage 1895a:61); "Canhoca" [-9.25000, 14.68333] (Ferreira 1904:111; Parker 1936:140). **Lunda Sul:** "Lunda" [-10.96667, 20.06667] (Monard 1937b:98); "Mutianvo" [-11.45000, 19.33333] (Themido 1941:8). **Moxico:** "environs du lac Calundo" [-11.80000, 20.86667] (Laurent 1964a:42). **Kwanza Sul:** "Lembu, Serra de Selles" [-12.86667, 14.11667] (Ferreira 1904:117); "Congulu" [-10.86667, 14.28333] (Parker 1936:140); "Condo" [-11.28333, 14.33333] (Günther 1865a:480; Boulenger 1887:448; Parker 1936:140). **Benguela:** "Ebanga" [-12.73333, 14.73333] (Monard 1937b:98). **Undetermined locality:** "Quango = Cuango" (Peters 1877a:612, 1881:147; Bocage 1895a:61) (Malanje Province, impossible to georeference. See History Section for more detailed information); "Carangigo" (Boulenger 1887:448).



MAP 242. Distribution of *Chamaeleo gracilis etiennei* in Angola.

Taxonomic and distributional notes: Records of *Chamaeleo senegalensis* Daudin, 1802 from Angola are referable to *C. g. etiennei* (see Peters Bocage 1895a). Both Tilbury (2010) and Glaw (2015) recognized *Chamaeleo gracilis etiennei* as a subspecifically distinct forest-dwelling form. The more southerly records listed above require confirmation and may refer to *C. dilepis*.

***Chamaeleo namaquensis* Smith, 1831**

NAMAQUA CHAMELEON

Chamaeleo Namaquensis Smith 1831:17. Syntypes: BMNH 65.5.4.61–62, MNHP 8017 (collector A. Smith) (see notes below). Type locality: “western coast of South Africa, near to the mouth of the Orange river” [Namaqualand].

Chamaeleon namaquensis: Bocage (1867c:227, 1870:68, 1895a:62), Boulenger (1887:462), Frade (1963:253).

Chamaeleo tuberculiferus: Günther (1865a:480).

Chamaeleo namaquensis = *C. tuberculiferus*: Bocage (1872:72).

Chamaeleo namaquensis: Branch (1998:228), Tilbury (2010:519), Glaw (2015:203), Ceriaco et al. (2016a:58).

Global conservation status (IUCN): Least Concern (Carpenter 2011).

Global distribution: The species ranges from western South Africa through Namaqualand and the Namib Desert to southern Angola.

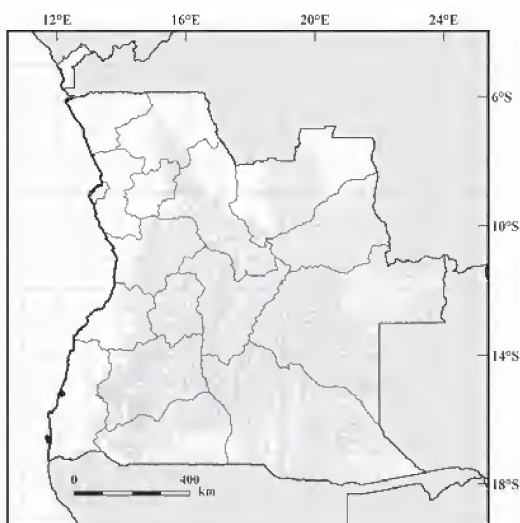
Occurrences in Angola (Map 243): The species occurs only in the arid portion of south-western Angola mainly in Namibe Province.

Namibe: “Mossamedes” [-15.20000, 12.15000] (Günther 1865a:480; Bocage 1867c:227, 1872:72, 1895a:62; Boulenger 1887:462; Ceriaco et al. 2016a:58).

Taxonomic and distributional notes:

Smith (1831) did not specify the number of the type specimens, nor their disposition. There is a long history of one stuffed specimen from Andrew Smith being present in Paris (Duméril and Duméril 1851; Duméril 1852; Brygoo 1983, although not mentioned by Guibé 1954) and this specimen has generally been regarded as a syntype and is, in fact, the only syntype mentioned by Klaver and Böhme (1987) and Glaw (2015). However, FitzSimons (1937) mentioned two specimens in the BMNH that he

regarded as types. These specimens correspond to BMNH 65.5.4.61–62, which although not marked as types in the BMNH registers, were obtained from Andrew Smith and have the explicit locality, “mouth of Orange River.” We regard these specimens as part of the original type series. Klaver and Böhme (1997) also noted the possibility that additional types might yet be found in the collection of the National Museums of Scotland. This species represents a distinct phylogenetic lineage within *Chamaeleo* and some authors have suggested that this taxon could be recognized as generically distinct (Townsend and Larson 2002), however it is strongly supported as a member of the *Chamaeleo* clade (Bates et al. 2014).



MAP 243. Distribution of *Chamaeleo namaquensis* in Angola.

Genus *Trioceros* Swainson, 1839***Trioceros oweni* (Gray, 1831)****OWEN'S CHAMELEON**

Chamaeleo Oweni Gray 1831b:7. Syntypes: BMNH 1946.8.21.48-49 (formerly BMNH xxiv.17.b and xxiv.17a) (collector Capt. W. Owen). Type locality: "Fernando Poo" [Bioko, Equatorial Guinea].

Chamaeleo oweni: Chirio and LeBreton (2007:190).

Trioceros oweni: Tilbury and Tolley (2009:65-66), Tilbury (2010:700), Trape et al. (2012:200), Glaw (2015:229).

Global conservation status (IUCN):

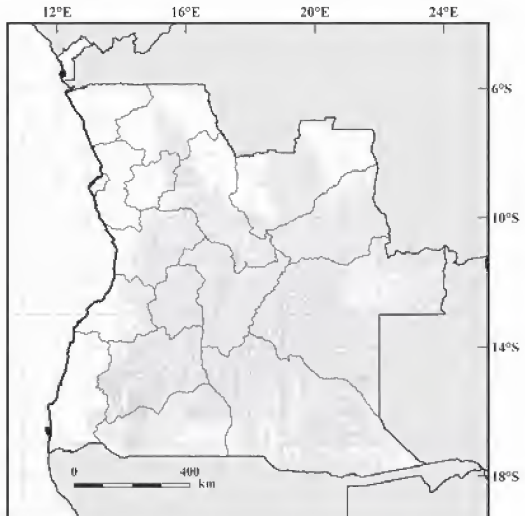
Least Concern.

Global distribution: Widely distributed in Central Africa, from southeastern Nigeria to Cabinda and across the northern half of the Democratic Republic of Congo.

Occurrences in Angola (Map 244): The species has been recorded only from the northern portion of the Cabinda enclave. **Cabinda:** "Cabinda" [-5.55000, 12.18333] (Tilbury 2010:703, 705).

Taxonomic and distributional notes:

This species is the type species of the genus *Trioceros* Swainson 1831, which Tilbury and Tolley (2009) and subsequent authors have treated as a distinct genus.



MAP 244. Distribution of *Trioceros oweni* in Angola.

Family Agamidae Gray, 1827**Genus *Acanthocercus* Fitzinger, 1843*****Acanthocercus cyanocephalus* (Falk, 1925)****Angolan Tree Agama**

Agama cyanocephala Falk 1925:83. Neotype: ZFMK 88492 (collector P. Wagner) designated by Wagner et al. (2018:27). Neotype locality: "garden in Ikelenge (-11.241592, 24.273256), northern Mwinilunga District," Zambia. Original type locality: "Angola" without further precision.

Stellio nigricollis: Bocage (1866a:43).

Stellio atricollis: Bocage (1879b:95, 1895a:22), Peters (1881:147), Boulenger (1885:358, 1905:110), Ferreira (1900a:49), Angel (1923:158), Schmidt (1933:9), Parker (1936:132), Monard (1937b:60), Themido (1941:7).

Agama atricollis: Boulenger (1885:356, 1905:110), Laurent (1950a:12, 1964a:38), Ferreira (1903:15), Schmidt (1933:9), Monard (1937b:58), Parker (1936:132), Themido (1941:7), Frade (1963: 253), Man-aças (1963:228).

Agama atricollis atricollis: Klausewitz (1957:161).

Agama cyanogaster: Loveridge (1957:195).

Acanthocercus atricollis: Spawls (2010).

Acanthocercus cyanocephalus: Ceriaco et al. (2014b:670), Ceriaco et al. (2016b:75), Wagner et al. (2018:27).

Acanthocercus cyanogaster: Branch and Conradie (2015:200).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from the southern Democratic Republic of Congo, through Angola and western Zambia to far northern Namibia.

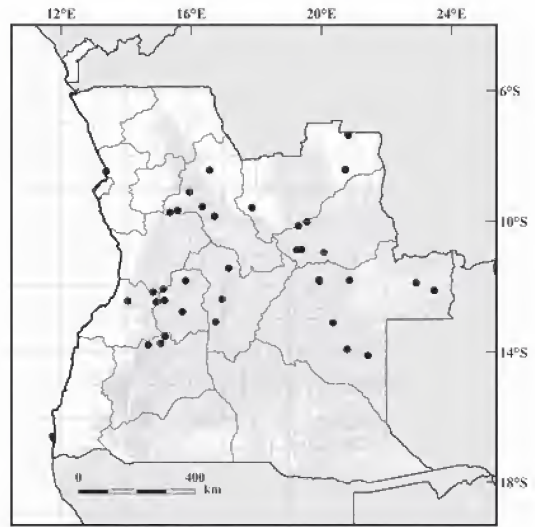
Occurrences in Angola (Map 245): The species occurs in the entire country with exception

of the southwest and the northwestern regions.

Malanje: “Bange N’gola” [-8.43333, 16.56667] (Boulenger 1905:110); “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:43, 1895a:22; Boulenger 1885:359, 1905:110; Ferreira 1903:15; Monard 1937b:57; Loveridge 1957:196); “Malanje” [-9.55000, 16.35000] (Peters 1881:147; Bocage 1895a:22; Monard 1937b:57); “Pungo-Andongo” [-9.66667, 15.58333] (Boulenger 1905:110); “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:670); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:75). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:12); “Cassange” [-9.58333, 17.86667] (Bocage 1895a:22; Monard 1937b:57; Wagner et al. 2018:47); “Carumbo, Lucapa” [-8.42278, 20.73917] (Branch and Conradie 2015:200);

“Cacolo (Minungo)” [-10.15000, 19.28333] (Manaças 1963:228). **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:38); “Village Sá-Tchisseke, près des sources du Cuílo, Alto Chicapa” [-10.86667, 19.38333] (Laurent 1964a:39); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:38); “Lunda” [-10.96667, 20.06667] (Monard 1937b:57, 58; Wagner et al. 2018:47). **Moxico:** “Fazenda Santa Cruz, Luso” [-11.78333, 19.91667] (Manaças 1963:228); “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:39); “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1963:228); “Cazombo, Haut Zambèze” [-11.88333, 22.91667] (Laurent 1964a:39); “Calunda, Haut Zambèze” [-12.11667, 23.46667] (Laurent 1964a:39); “Cassamba” [-13.10000, 20.35000] (Manaças 1963:228); “Sessa (Luchazes)” [-13.91667, 20.80000] (Manaças 1963:228); “Vila Gago Coutinho (Bundas)” [-14.10000, 21.43333] (Manaças 1963:228). **Luanda:** “Dande” [-8.46667, 13.38333] (Wagner et al. 2018:47). **Kwanza Sul:** “Mombolo” [-12.16667, 14.83333] (Wagner et al. 2018:47). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:9; Wagner et al. 2018:47); “Silva Porto” [-12.38333, 16.95000] (Manaças 1963:228); “Cachingues” [-13.06667, 16.75000] (Manaças 1963:228). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:57, 58); “Galanga (Galange)” [-12.06667, 15.15000] (Bocage 1895a:22; Monard 1937b:57); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:132); “Huambo” [-12.76667, 15.73333] (Wagner et al. 2018:47); “Cuma” [-12.86667, 13.06667] (Wagner et al. 2018:47). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:22; Monard 1937b:57); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:22; Monard 1937b:57). **Huíla:** “Rio Cuce” [-13.51667, 15.20000] (Bocage 1895a:22; Monard 1937b:57); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:57, 58); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:22; Monard 1937b:57; Themido 1941:7). **Undetermined Locality:** “with no precise location” (Bocage 1879b:95), “Quando” (Monard 1937b:57); “Cuanza r.” (Boulenger 1905:110).

Taxonomic and distributional notes: *Acanthocercus* species outside of Arabia and the Horn of Africa, including those in Angola, have long been referred to *A. atricollis* (Smith, 1849). A reference to *Stellio nigricolis* (Bocage 1866a) appears to be a *lapsus* for *A. atricollis* as well (Ceriaco et al. 2014b; Wagner et al. 2018). Klauswitz (1957) divided this species into several subspecies, but Angolan material fell into the nominotypical form (Branch 1998, Ceriaco et al. 2014b). Subse-



MAP 245. Distribution of *Acanthocercus cyanocephalus* in Angola.

quent revisionary work on the genus (Wagner et al., 2018) revealed that some Angolan *Acanthocercus* are referable to *A. cyanocephalus*, a long-forgotten name proposed by Falk (1925) based on Angolan material, but without a precise type locality. Southern Angolan and northern Namibian specimens referred to *A. cyanocephalus* by Wagner et al. (2018), however, represent an undescribed lineage, treated here as *Acanthocercus* sp. (see below). Loveridge (1957) erroneously synonymized *Stellio nigricollis* cited by Bocage (1866a) from Angola with *Agama cyanogaster* (Rüppell, 1835) and more recently Branch and Conradie (2015) also cited this species from Angola. This certainly represents a misidentification or a *lapsus* for *A. cyanocephalus*, since *A. cyanogaster* is restricted to the Horn of Africa and adjacent parts of East Africa (Uetz and Hošek 2017).

Acanthocercus sp.

Stellio atricollis: Bocage (1895a:22).

Agama atricollis: Monard (1937b:58).

Agama colonorum: Angel (1923:159).

Agama cyanogaster: Loveridge (1957:195).

Acanthocercus atricollis: Branch (1998:218), Spawls (2010).

Acanthocercus cyanocephalus: Wagner et al. (2018:27).

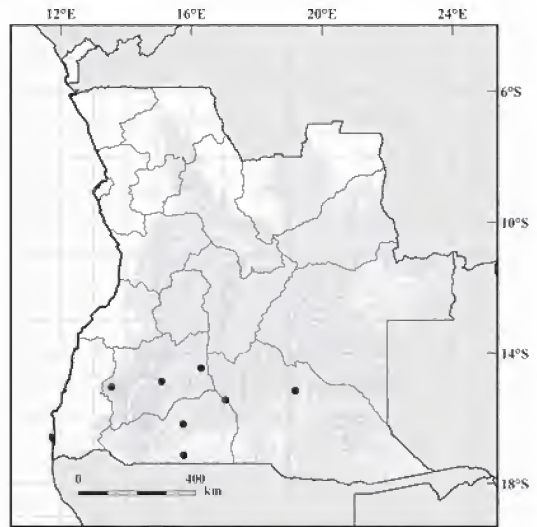
Global distribution: The species is known only from Angola and adjacent northern Namibia.

Occurrences in Angola (Map 246): The species is only known from the plateau areas in the southwestern regions of the country.

Huíla: “Vila da Ponte” [-14.46667, 16.30000] (Monard 1937b:57, 58; Wagner et al. 2018:46); “Capelongo” [-14.88333, 15.088333] (Wagner et al. 2018:47); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:22; Monard 1937b:57; Loveridge 1957:196).

Cunene: “Mupa” [-16.18333, 15.75000] (Monard 1937b:57, 58); “Mupanda” [-17.13333, 15.76667] (Monard 1937b:57, 58).

Cuando Cubango: “Région du Kwito, affluent du Kubango” [-15.162795, 19.169871] (Angel 1923:158). “Kakindo” [-15.45000, 17.05000] (Monard 1937b:57, 58).



MAP 246. Distribution of *Acanthocercus* sp. in Angola.

Taxonomic and distributional notes: Wagner et al. (2018) included this taxon within their concept of *A. cyanocephalus*, however, morphological and molecular analyses of freshly collected material in Huíla Province suggest that the southwestern Angolan populations of *Acanthocercus* represent an undescribed lineage, closely related to *A. atricollis*. A formal description of this new form is being prepared. A specimen reported by Angel (1923) from the Kwito region of Cuando Cubango as *Agama colonorum* is here presumed to be referable to this new form, as it is the only large, arboreal agamid occurring in this region of Angola.

Genus *Agama* Daudin, 1802

Agama aculeata Merrem, 1820

WESTERN GROUND AGAMA

Agama aculeata Merrem 1820:53. Lectotype: Specimen illustrated in Fig. 6, plate 8 of Seba (1735) (collector unknown), probably lost, designated by Wagner et al. (2012). Type locality: “Promontorio bonae spei” [= the Cape of Good Hope] South Africa.

Agama aculeata: Bocage (1866a:43, 1867b:221), Branch (1998:212), Leaché et al. (2009:274), Wagner et al. (2012:177), Ceriáco et al. (2016a:58).

Agama armata: Bocage (1870:68, 1879c:88, 1895a:19, 1896a:110, 1896b:127), Boulenger (1905:110).

Agama hispida aculeata: Loveridge (1936a:52), Mertens (1938a:432), Hellmich (1957a:38, 1957b:51), Manaças (1963:229), Laurent (1964a:40).

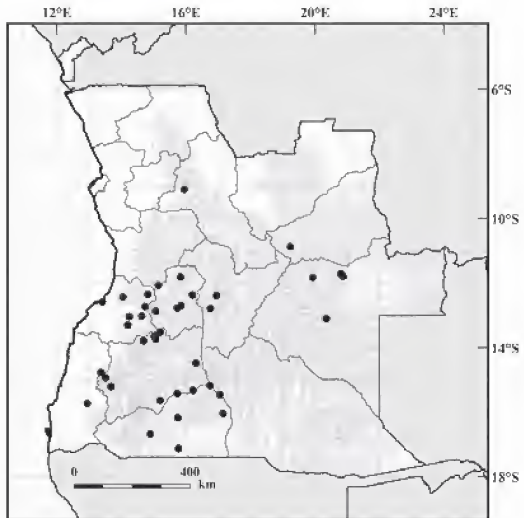
Agama hispida var. *aculeata*: Monard (1937b:59).

Agama aculeata aculeata: Bates et al. (2014:303).

Global conservation status (IUCN): Least Concern.

Global distribution: Endemic to southern Africa where it has an extensive range from southern Angola, most of Namibia except the Namib Desert proper, western Botswana and the western half of South Africa.

Occurrences in Angola (Map 247): The species widespread in Angola except for the more northerly provinces. **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:43, 1895a:19, 1896b:127). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:40). **Moxico:** “Lago Cameia” [-11.71667, 20.80000] (Mananças 1963:229), “environs du lac Claundo” [-11.80000, 20.86667] (Laurent 1964a:40), “Calombe, Luso” [-11.83333, 19.93333] (Mananças 1963:229); “Cassamba” [-13.10000, 20.35000] (Mananças 1963:229). **Bié:** “Silva Porto” [-12.38333, 16.95000] (Mananças 1963:229); “Cubango basin (15)” [-12.78555, 16.75694] (Conradie et al. 2016:8-9, 23). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:59); “Galanga” [-12.06667, 15.15000]



MAP 247. Distribution of *Agama aculeata* in Angola.

(Bocage 1895a:19); “Bela-Vista (Sanguengue)” [-12.36667, 16.20000] (Hellmich 1957b:51); “Nova Lisboa” [-12.76667, 15.73333] (Manaças 1963:229); “Santo-Amaro” [-12.70000, 15.85000] (Monard 1937b:59); “Cuma” [-12.86667, 15.06667] (Loveridge 1936a:52). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:19) “Quissange” [-12.43333, 14.05000] (Bocage 1895a:19); “Benguella” [-12.58333, 13.41667] (Loveridge 1936a:52); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:59); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:38); “Cubal” [-13.03333, 14.25000] (Mertens 1938:432); “Hanha” [-13.30000, 14.20000] (Bocage 1896:110). **Huíla:** “Rio Cuce” [-13.51667, 15.20000] (Bocage 1895a:19); “Cassôco” [-13.65000, 15.01667] (Bocage 1895a:19); “Caconda” [-13.73333, 15.06667] (Bocage 1879c:88); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:59); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:59); “Boca de Humpata, Sá da Bandeira” [-14.93333, 13.51667] (Laurent 1964a:40); “Chibia, Rio Huíla” [-15.20000, 13.68333] (Hellmich 1957b:51); “Kambisa” [-15.31667, 16.21667] (Monard 1937b:59); “Kulüi” [-15.41667, 15.73333] (Monard 1937b:59).

Namibe: “Biballa” [-14.76667, 13.36667] (Bocage 1895a:19; Ceríaco et al. 2016a:58); “Virei-Cahinde” [-15.73333, 12.95000] (Hellmich 1957b:51; Ceríaco et al. 2016a:58); “Molundo” [-15.63333, 15.20000] (Monard 1937b:59); “Chimporo” [-16.03333, 17.15000] (Monard 1937b:59; Ceríaco et al. 2016a:58). **Cunene:** “Mupanda” [-17.13333, 15.76667] (Monard 1937b:59); “Riv. Mbalé” [-15.16667, 16.75000] (Monard 1937b:59); “Kakindo” [-15.45000, 17.05000] (Monard 1937b:59); “Humbe” [-16.68333, 14.90000] (Bocage 1895a:19); “Mupa” [-16.18333, 15.75000] (Monard 1937b:59). **Undetermined Locality:** “Between Bihé and Quilenges” (Ferreira 1905:110); “Between Benguela and Bihé” (Ferreira 1905:110); “Quando” (Bocage 1895a:19).

Taxonomic and distributional notes: The “holotype” of *A. aculeata* was previously identified as ZMB 750 (Denzer et al. 1997). However, Wagner et al. (2012) demonstrated that this specimen, actually an *Agama atra* Daudin, 1802, was one of four syntypes. They reviewed the complex history of these specimens and selected as a lectotype the only one of the syntypes actually referable to *A. aculeata* as currently recognized. The species *Agama hispida* (Kaup, 1827) and *Agama armata* Peters, 1854 have previously been included in the Angolan fauna by early authors. *Agama hispida* is, however, endemic to South Africa and adjacent southwestern Namibia (Branch 1998; Bates et al. 2014) and Angolan citations to it are likely referable to *A. aculeata* or, in some cases, to the superficially similar *Agama anchietae* Bocage, 1896, with which it occurs sympatrically in Southern Angola and Namibia. *Agama armata* likewise is extralimital, with a distribution in southeastern Africa.

Agama anchietae Bocage, 1896

ANCHIETA’S AGAMA

Agama Anchietae (Bocage 1896b:129). Syntypes: MBL specimen numbers unknown (collectors J.A. d’Anchieta [Benguella, Catumbella, Dombe] and H. Capello and R. Ivens [Mossamedes]), destroyed by fire 18 March 1978. Type locality: “Benguella, Catumbella, Dombe et Mossamedes,” Benguella and Namibe provinces, Angola.

Agama aculeata: Bocage (1867b:221).

Agama armata: Bocage (1887b:203, 1895a:19).

Agama Anchietae: Bocage (1897a:194).

Agama anchietae: Boulenger and Power (1921:268), Monard (1937b:59), Frade (1963:253), Laurent (1964a:42), Branch (1998:214), Leaché et al. (2009:274), Bates et al. (2014:304), Ceríaco et al. (2016a:21, 58).

Agama anchietae anchietae: Schmidt (1933:9), Parker (1936:131), Laurent (1947:5).

Global conservation status (IUCN): Not Evaluated.

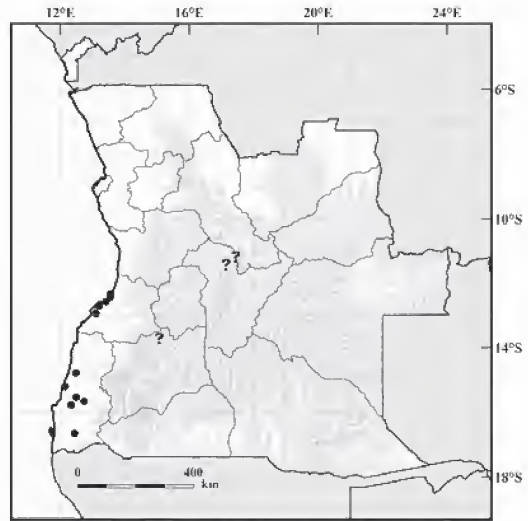
Global distribution: This species has an extensive geographical range that extends from the northwestern part of South Africa northwards through Namibia and Angola to the southern Democratic Republic of the Congo.

Ocurrences in Angola (Map 248): The species occurs chiefly in southern lowland regions of Angola, however, there are two isolated records in Bié Province, central Angola, which require confirmation. **Bié:** “Gauca” [-11.18333, 17.45000] (Schmidt 1933:9); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:9). **Benguela:** “Lobito” [-12.35000, 13.55000] (Monard 1937b:59); “Catumbella” [-12.43333, 13.55000] (Bocage 1867b:221, 1895a:21, 1896b:129, 1897a:194; Boulenger and Power 1921:269; Laurent 1947:5; Monard 1937b:59); “Benguella” [-12.58333, 13.41667] (Bocage 1867b:221, 1895a:21, 1896b:127, 1897a:194; Laurent 1947:5; Monard 1937b:59); “Huxe” [-12.71667, 13.20000] (Boulenger and Power 1921:269); “Dombe” [-12.95000, 13.10000] (Bocage 1867b:221, 1895a:21, 1896b:127, 1897a:194; Laurent 1947:5; Monard 1937b:59). **Huíla:** “Caconda” [-13.73333, 15.06667] (Boulenger and Power 1921:269; Monard 1937b:59). **Namibe:** “Maconjo (= Fazenda Mucungo)” [-14.782192, 12.486557]

(Boulenger and Power 1921:269; Monard 1937b:59; Ceríaco et al. 2016a:58); “Mossamedes” [-15.20000, 12.15000] (Bocage 1887b:203, 1895a:21, 1896b:127, 1897a:194; Monard 1937b:59; Ceríaco et al. 2016a:58); “Iona National Park” [-16.65753, 12.43807] (Ceríaco et al. 2016a:21); “Pico Azevedo” [-15.53400, 12.49197] (Ceríaco et al. 2016a:21); “Namibe Natural Park” [-15.77428, 12.33311] (Ceríaco et al. 2016a:21); “100 km southeast of Moçâmedes” [-15.66515, 12.73503] (Laurent 1964a:42; Ceríaco et al. 2016a:58). **Undetermined Locality:** “Cuangu” (Boulenger and Power 1921:269) (Malanje Province impossible to georeference: See History Section for more detailed information).

Taxonomic and distributional notes:

Boulenger and Power (1921) referred to two specimens from “Caconda” and “Catumbella” in the British Museum collection sent by Bocage, stating that the “Caconda” material belonged to the type series. However, it is clear (Bocage 1896b, 1897a) that this cannot be the case. Specimens of *A. anchietae* can be confused with the similarly-sized ground dwelling congener *A. aculeata*, so all older records should be reexamined.



MAP 248. Distribution of *Agama anchietae* in Angola.

***Agama congica* Peters, 1877**

CONGO AGAMA

Agama colonorum var. *congica* (Peters 1877a: 612). Syntypes: ZMB 9169 (3 specimens) *fide* Bauer et al. (1995). Type locality: “Chinchoxo,” Cabinda Province, Angola.

Agama colonorum: Bocage (1866a:42, 1895a:17).

Agama planiceps: Bocage (1887a:178, 1895a:18, 1896a:110).

Agama planiceps planiceps: Loveridge (1936a:56).

Agama colonorum var. *congica*: Denzer et al. (1997:313).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The distribution of this species has not been established, but it is probably limited to the region of northern Angola and adjacent regions of central Africa.

Occurrences in Angola (Map 249): The species is known from northwestern Angola.

Cabinda: “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:612; Loveridge 1957:191; Wolfgang et al. 1997:313); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:42, 1887a:178, 1895a:17). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:17, 18).



MAP 249. Distribution of *Agama congica* in Angola.

Taxonomic and distributional notes: *Agama congica* was described by Peters (1877) as a variety of *Agama colonorum*. On the basis of the recommendation of Philipp Wagner, we have recognized *A. congica* as specifically distinct. The distribution and affinities of this taxon are currently under study. Ceríaco et al. (2014b) considered that specimens of Capanda Dam, Malanje Province, were true *congica*, but recent reanalysis suggests that these specimens should be considered as representatives of an as yet undescribed endemic form (see *Agama* sp. account).

***Agama mucosoensis* Hellmich, 1957**

MUCOSO AGAMA (Endemic)

Agama agama mucosoënsis (Hellmich 1957a:44, pl. 8). Holotype: ZSM 117/53 (collector W. Hellmich). Type locality: “Mucoso bei Dondo” [= Mucoso, Dondo] Kwanza Norte Province, Angola.

Agama agama mucosoënsis: Hellmich (1957b:50).

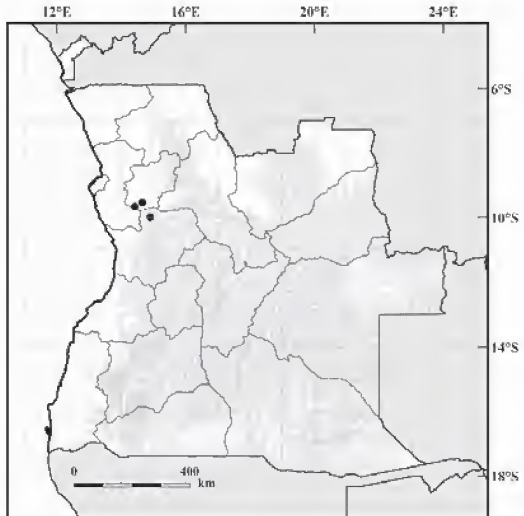
Agama mucosoensis: Wagner et al. (2012:184), Ceríaco et al. (2014b:670).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is only known from Angola.

Ocurrences in Angola (Map 250): The species is known only from the type locality and near areas in western Angola. **Kwanza Norte:** “Mucoso” [-9.53333, 14.65000] (Hellmich 1957a:44; Wagner et al. 2012. 18); “Dondo” [-9.66667, 14.41667] (Hellmich 1957b:50; Wagner et al. 2012. 18). **Kwanza Sul:** “Libolo/Luati” [-9.98333, 14.90000] (Hellmich 1957b:50; Wagner et al. 2012. 18).

Taxonomic and distributional notes: Hellmich (1957a) described *Agama agama mucosoënsis* based on a type series of 72 specimens collected in “Mucoso bei Dondo”, Kwanza Norte Province, recently revalidated by Wagner et al. (2012) as a full species. The only published data for this species are from Kwanza Norte Province, although specimens have recently been deposited in the Museu Nacional de História Natural e da Ciência Lisboa, Portugal from “Açucareira”(Bengo) and “Quifangondo” (Luanda), Angola (L. Ceríaco and M. Marques, pers. obs.). Ceríaco et al. (2014b) also suggested that the species might occur in Malanje Province. There is a possibility of confusion between this species and *A. congica*, both of which exhibit sexual dimorphism, and all historical records should be reexamined with this in mind.



MAP 250. Distribution of *Agama mucosoensis* in Angola.

***Agama planiceps* Peters, 1862**

NAMIB ROCK AGAMA

Agama planiceps Peters 1862a:15. Syntypes: ZMB 4200–4201 (collector C. H. Hahn). Type locality: “Neu-Barmen” [= Gross Barmen, Otjozondjupa Region], Namibia.

Agama planiceps: Schmidt (1933:9), Ceríaco et al. (2016a:21, 58).

Global conservation status (IUCN): Not Evaluated.

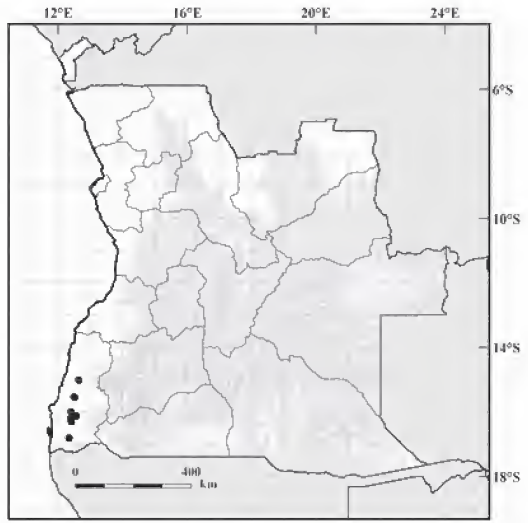
Global distribution: *Agama planiceps* occurs in the northwestern quadrant of Namibia and the southwestern quadrant of Angola.

Ocurrences in Angola (Map 251): The species is known the true desert areas of Namibe province. **Namibe:** “Pico Azevedo” [-15.55000, 12.51667] (Schmidt 1933:9; Ceríaco et al.

2016a:58); “Lion Cave’s at 3.4 km SW of Espinheira camp” [-16.81250, 12.33969] (Ceríaco et al. 2016a:21–22); “Omauha Lodge camp” [-16.19872, 12.40008] (Ceríaco et al. 2016a:22); “Iona National Park, north of Tamber” [-15.99611, 12.40667] (Ceríaco et al. 2016a:22); “Iona National Park, south side of Curoca River crossing” [-16.30433, 12.41710] (Ceríaco et al. 2016a:22); “Pediva Hot Springs” [-16.12214, 12.56111] (Ceríaco et al. 2016a:22); “Namibe Lubango road, road marker 59, 1.8 km west by road from Caraculo, north side of the road” [-15.01600, 12.64356] (Ceríaco et al. 2016a:22); “Pico Azevedo” [-15.53400, 12.49197] (Ceríaco et al. 2016a:22).

Taxonomic and distributional notes:

Bauer et al. (1995) incorrectly gave the current name of the type locality of *A. planiceps* (Neu Barmen) as “Otjimbingue,” which is actually another Rhenish Mission site to the southwest of Neu Barmen. In Angola the species appears to be confined to the true desert areas in Namibe, being replaced by *A. schacki* in the northern and eastern parts of the province. However, Namibian *A. planiceps* occur broadly throughout arid and semi-arid areas where suitable rocky habitats occur. Monard’s (1937b) record of “*A. planiceps*” from Cuando Cubango Province is certainly in error and is not included in our map.



MAP 251. Distribution of *Agama planiceps* in Angola.

Agama schacki Mertens, 1938

SCHACK’S ROCK AGAMA (Endemic)

Agama planiceps schacki (Mertens 1938a:433). Holotype: SMF 25299 (collector W. Schack). Type locality: “Cubal, 900m H. Prov. Benguella, Angola” [= Cubal], Benguela Province, Angola.

Agama planiceps: Bocage (1887c:210, 1895a:18, 1896a:110), Boulenger (1885:358, 1905:110), Mertens (1926:152), Monard (1937b:60).

Agama colonorum: Boulenger (1885:357), Ferreira (1905:117, 1906:170).

Agama planiceps schacki: Hellmich (1957a:47, 1957b:52), Mertens (1967:61), Manaças (1963:230), Laurent (1964a:40), Branch (1998:218).

Global conservation status (IUCN): Not Evaluated

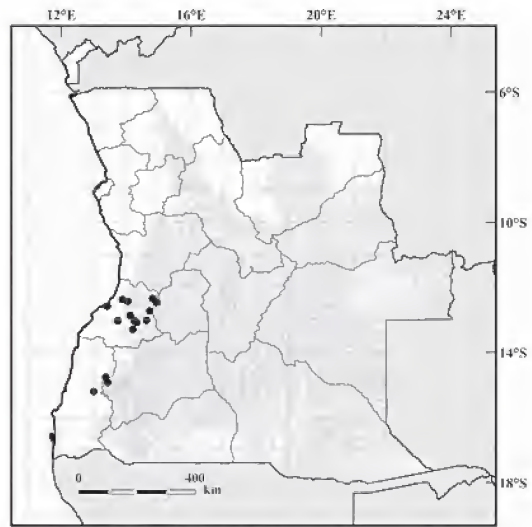
Global distribution: *Agama schacki* occurs in the southwestern quadrant of Angola.

Ocurrences in Angola (Map 252): The species occurs along the southern areas of the escarpment (Benguela and Huíla provinces), as well as in the lowlands of Benguela Province. **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:18); “Morro de Pundo” [-12.38333, 13.88333] (Parker 1936:129); “Quissange” [-12.43333, 14.05000] (Bocage 1887c:210, 1895a:18); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:18); “Benguella” [-12.58333, 13.41667] (Boulenger 1885:357; Bocage 1895a:18); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:60); “Lembu, Serra de Selles” [-12.86667, 14.11667] (Ferreira 1905:117, 1906:170); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:47); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:433, 1967:61; Hellmich 1957b:52); “Marco de Canavezes” [-13.08333, 14.33333] (Laurent 1964a:40); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:110); “Catengue” [-13.03333, 13.73333] (Mertens 1927:152). **Huíla:** “Senhora do Monte, Sá da Bandeira” [-14.93333, 13.43333] (Laurent 1964a:40); “Fazenda Bumbo, Humpata” [-15.20000, 13.00000] (Laurent 1964a:40). **Namibe:**

“Biballa” [-14.76667, 13.36667] (Bocage 1895a:18; Ceriaco et al. 2016a:58).

Taxonomic and distributional notes:

Mertens (1938a) diagnosed *A. planiceps schacki* from the nominotypical form on the basis of a larger, more robust body, a greater number of midbody scale rows (80–90 vs. 63–76), and a black (rather than red) tail tip. Branch (1998) stated that *A. p. schacki* replaces the typical form in Angola. Recently collected molecular and morphological data suggests that both forms occur in Angola and that *planiceps* and *schacki*, although closely related, are two distinct species. A detailed review of the group is being prepared. Records from Benguela (Boulenger 1885) and Lembu (Ferreira 1906, 1906) originally referred to *Agama colonorum* have been tentatively assigned to *A. schacki* on the basis of their distribution.



MAP 252. Distribution of *Agama schacki* in Angola.

SERPENTES

Family Typhlopidae Merrem, 1820

Genus *Afrotyphlops* Broadley and Wallach, 2009

Afrotyphlops angolensis (Bocage, 1866)

ANGOLA BLIND SNAKE

Onychocephalus angolensis Bocage 1866a:46, 1866b:65. Holotype: MBL T79.1134 (collector F.A.P. Bayão), destroyed by fire on 18 March 1978. Type locality: “le district du Duque de Bragança” [= Calandula], Malanje Province, Angola.

Onychocephalus Kraussii: Bocage (1873a:252).

Onychocephalus angolensis: Bocage (1879b:95).

Typhlops conigicus: Bocage (1895a:63).

Typhlops punctatus punctatus: Loveridge (1957:242).

Typhlops angolensis adolfi: Laurent (1964a:88).

Typhlops angolensis: Laurent (1964c:424), Roux-Estève (1974a:490; 1974b:46), McDiarmid et al. (1999:90), Spawls et al. (2004:288).

Typhlops angolensis angolensis: Manaças (1973:189)

Rhinotyphlops angolensis: Broadley and Cotterill (2004:44), Chirio and LeBreton (2007:332).

Afrotyphlops angolensis: Broadley and Wallach (2009:29), Ceriaco et al. (2014b:672), Wallach et al. (2014:13), Hedges et al. (2014:20).

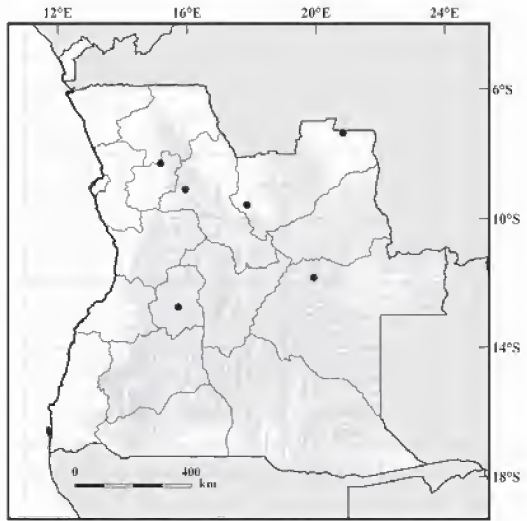
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species occurs in both forest and savanna from Cameroon south through the Congo Basin to northern Angola and northeast Zambia and east to Uganda and Kenya.

Occurrences in Angola (Map 253): The species occurs in the northeastern Angola. **Kwanza Norte:** “Canzele” [-8.30000, 15.18333] (Laurent 1964c:424). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:46, 1866b:65, 1873a:252; Loveridge 1957:242; Laurent 1964c:424; Roux-Estève 1974a:490, 1974b:57; Broadley and Wallach 2009:29; Wallach et al. 2014:13). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964b:88; Roux-Estève

1974b:57); “Cassange” [-9.58333, 17.86667] (Bocage 1879b:95). **Mexico:** “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1973:189). **Huambo:** “Nova Lisboa” [-12.76667, 15.73333] (Roux-Estève 1974b:57).

Taxonomic and distributional notes: The species was first named by Bocage (1866a), who provided a diagnosis and description, but the status of the species as new was indicated conditionally, as “*Onychocephalus angolensis* Nov. sp.?” The name was used without such a caveat in a subsequent publication Bocage (1866b). Both publications appeared in the November 1866 issue of the same journal. See Roux-Estève (1974b), McDiarmid et al. (1999) and Broadley and Wallach (2009) for comprehensive chresonymies and details of distribution elsewhere in Africa.



MAP 253 Distribution of *Afrotiphlops angolensis* in Angola.

Afrotiphlops anomalus (Bocage, 1873)

ANGOLAN GIANT BLIND SNAKE (Endemic)

Onychocephalus anomalus Bocage 1873a:248, pl. 1, fig. 3. Syntypes: MBL 1177A–D (four specimens), (collector J.A. d’Anchieta and J.J. da Graça), destroyed by fire 18 March 1978. Type locality: “Huilla, l’intérieur de Mossamedes” [= Huila], Huila Province, Angola.

Typhlops (Onychocephalus) Anchietae Bocage 1886a:172. Holotype: MBL 1871, (collector J. Anchieta), destroyed by fire 18 March 1978. Type locality: “Huilla” [= Huila], Huila Province, Angola.

Typhlops anchietae: Boulenger (1893:40, 1915:197), Bocage (1895a:63, 1897a:198), Monard (1937b:103).

Typhlops anomalus: Boulenger (1893:47), Bocage (1895a:70), Ferreira (1897b:243)

Typhlops anomalus: Monard (1937b:103, 105).

Rhinotyphlops anomalus: Roux-Estève (1974a:495, 1974b:193), McDiarmid et al. (1999:78).

Megatyphlops anomalus: Broadley and Wallach (2009:48), Wallach et al. (2014:423).

Afrotiphlops anomalus: Hedges et al. (2014:20).

Global conservation status (IUCN): Not Evaluated.

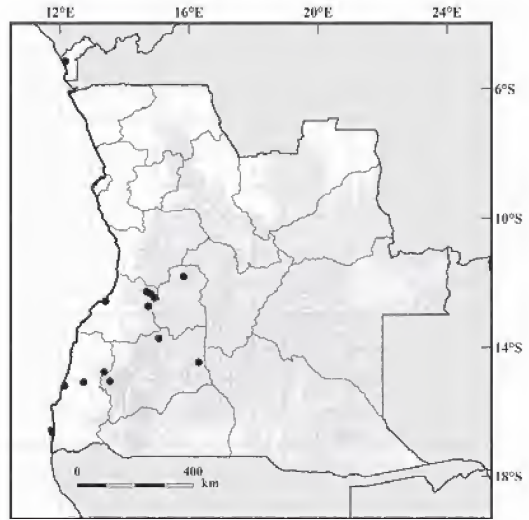
Global distribution: The species is endemic to Angola.

Occurrences in Angola (Map 254): The species is restricted to the southwestern areas of the country. **Cabinda:** “Loango (?)” [-5.15000, 12.16667] (Boulenger 1893:47, 1915:197; Monard 1937b:103). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:103, 105; Broadley and Wallach 2009:48). **Benguela:** “Quibula” [-12.28333, 14.68333] (Bocage 1895a:70; Monard 1937b:103; Broadley and Wallach 2009:48); “Cahata” [-12.35000, 14.81667] (Bocage 1895a:70; Monard 1937b:103; Broadley and Wallach 2009:48); “Quindumbo [-12.46667, 14.93333] (Bocage 1895a:70; Broadley and Wallach 2009:48); “Benguella” [-12.58333, 13.41667] (Bocage 1895a:70; Boulenger 1915:197; Monard 1937b:103); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:103, 105; Broadley and Wallach 2009:48). **Huila:** “Huilla” [-15.05000, 13.55000] (Bocage 1873b:248, 252, 1886a:172, 1895a:63, 70, 1897a:198; Monard 1937b:103; Roux-Estève 1974b:194; Broadley and Wallach 2009:48; Wallach et al. 2014:423); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:70; Ferreira 1897:243; Monard 1937b:103; Roux-Estève 1974b:194; Broadley and Wallach 2009:48); “Kuvangu (Vila-da-Ponte)” [-14.46667, 16.30000] (Monard 1937b:103, 105; Broadley and Wallach 2009:48). **Namibe:** “Biballa” [-14.76667, 13.36667] (Bocage 1895a:70; Monard

1937b:103; Broadley and Wallach 2009:48); “Chiyaka district” [vic. -15.08333, 12.73333] (Roux-Estève 1974b:194; Broadley and Wallach 2009:48); “Mossamedes” [-15.20000, 12.15000] (Bocage 1873b:248; Boulenger 1893:47).

Taxonomic and distributional notes:

Hedges et al. (2014) moved all species previously allocated to *Megatyphlops* Broadley and Wallach, 2009 to *Afrotyphlops* based on their phylogenetic analysis, which demonstrated that members of the former group are embedded within a clade containing the type specimen of the latter. Boulenger (1893, 1915) identified a specimen from “Loango,” a former kingdom within Cabinda Province as *M. anomalus*. However, this is certainly a misidentification or error in locality, as Roux-Estève (1974a) demonstrated that this species was only reliably known from the mountainous regions of Benguela and Huíla, south of the Cuanza River. Wallach et al. (2014) also listed Bié and Cuanza Sul in the range of the species, but this does not appear to be based on previously published records. McDiarmid et al. (1999) included northern Namibia in the stated distribution of this species, but we are not aware of any confirmed specimens outside of Angola. See Broadley and Wallach (2009) for chresonymy and maps of global distribution.



MAP 254. Distribution of *Afrotyphlops anomalus* in Angola.

***Afrotyphlops lineolatus* (Jan, 1864)**

COMMON LINED BLIND SNAKE

Typhlops (Ophthalmidion) lineolatus Jan 1864:24. Holotype, UUMZ 725 (collector A. Afzel), lost *vide* Roux-Estève (1974b) and Hahn (1980). Type locality: “Sierra-Leona” [= Sierra Leone].

Typhlops bocagei Ferreira 1904:114. Syntypes: MBL specimen numbers not known (collector F. Newton) (destroyed July 1943 during WWII *vide* Broadley and Wallach 2009:40). Type locality: “Cabicula, Bom Jesus (margens do Quanza)” [= Bom Jesus], Bengo Province, Angola.

Typhlops Boulengeri Bocage (1893:117). Lectotype: BMNH 1946.1.11.18, formerly BMNH 1893.12.27.12 (collector J. Ancheta) designated by Broadley and Wallach (2009:40). Type locality: “Quindumbo, dans l’intérieur de Benguella” [= Quindumbo], Benguela Province, Angola.

Onychocephalus liberiensis (part): Bocage (1866a:46, 1873a:252).

Onychocephalus lineolatus: Bocage (1873a:252, 1866b:65).

Typhlops eschrichtii (part): Günther (1876b:678).

Typhlops (Ophthalmidion) Eschrichtii var. *lineolata*: Peters (1877a:614).

Typhlops (Ophthalmidion) Eschrichtii var. *intermedia*: Peters (1877a:614).

Typhlops (Ophthalmidion) Eschrichtii (part): Peters (1881:147).

Typhlops (Ophthalmidion) Kraussii (part): Bocage (1887a:180).

Typhlops lineolatus: Boulenger (1893:43), Roux-Estève (1974b:76), McDiarmid et al. (1999:107), Spawls et al. (2004:290).

Typhlops punctatus var. *intermedia* (part): Bocage (1895a:66).

Typhlops punctatus var. *lineolata*: Bocage (1895a:66).

Typhlops punctatus var. *lineolatus*: Bocage (1896a:112), Ferreira (1903:9).

Typhlops punctatus (part): Boulenger (1900a:50, 1905:112), Monard (1937b:103, 104), Themido (1941:9).

Typhlops Boulengeri: Bocage (1895a:64, 1897a:198), Ferreira (1900a:50, 1906:167), Boulenger (1915:196), Monard (1937b:103, 104), Laurent (1964a:89).

Typhlops punctatus punctatus (part): Parker (1936:120), Mertens (1937a:11, 1938a:438), Laurent (1950a:7), Hellmich (1957a:70), Loveridge (1957:242).

Typhlops bocagei: Monard (1937b:103).

Typhlops Boulengeri Boulengeri: Laurent (1964c:414).

Typhlops lineolatus lineolatus: Roux-Estève (1974a:492).

Rhinotyphlops lineolatus: Broadley and Cotterill (2004:45).

Rhinotyphlops lineolatus lineolatus: Chirio and LeBreton (2007:338).

Afrotyphlops lineolatus: Wallach and Broadley (2009:41), Wallach et al. (2014:14), Hedges et al. (2014:20).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widely distributed in the savannas of sub-Saharan Africa from Senegal east to Sudan and Ethiopia and south to northern Tanzania, Katanga (Democratic Republic of Congo) and Angola as far south as Benguela.

Ocurrences in Angola (Map 255): The species occurs mainly in western Angola, however there are records in Lunda Norte Province.

Cabinda: “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:614); “Landana” [-5.21667, 12.15000] (Roux-Estève 1974b:104).

Zaire: “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:66, 1887a:180; Monard 1937b:103; Roux-Estève 1974b:104).

Lunda Norte: “rivière Muari (affluente de la Luachimo), dans le environs de Dundo” [-7.28333, 20.93333] (Laurent 1950a:7); “Dundo” [-7.36667, 20.83333] (Laurent 1950:7, 1964a:89); “Muita” [-7.80000, 21.45000] (Laurent 1950a:7).

Lunda Sul: “Mutianvo” [-11.45000, 19.33333] (Themido 1941:9).

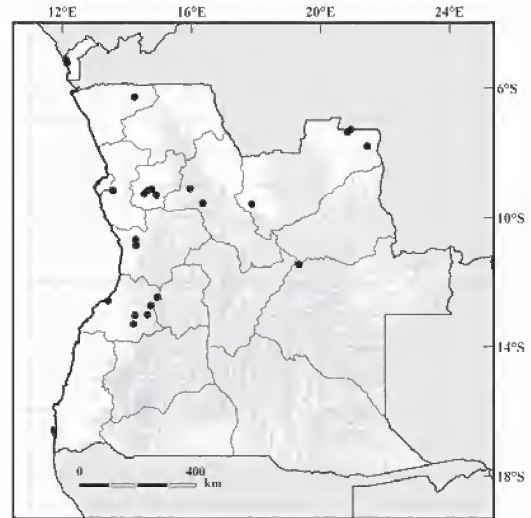
Malanje: “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1873a:252; Bocage 1895a:66; Monard 1937b:103); “Cassange” [-9.58333, 17.86667] (Bocage 1895a:66; Monard 1937b:103); “Malanje” [-9.55000, 16.35000] (Peters 1881:147).

Bengo: “Cabricula, Bom Jesus (margem do Quanza)” [-9.16667, 13.56667] (Ferreira 1904:114; Monard 1937b:103; Loveridge 1957:242).

Kwanza Norte: “Golungo Alto” [-9.13333, 14.76667] (Boulenger 1905:112; Monard 1937b:103; Roux-Estève 1974b:104); “Cambondo” [-9.15963, 14.65827] (Ferreira 1906:167; Monard 1937b:103, 104); “Rio Luinha” [-9.26667, 14.53333] (Ferreira 1906:167; Monard 1937b:103, 104; Wallach and Broadley 2009:41); “N’dalla Tando, Cazengo” [-9.30000, 14.91667] (Ferreira 1903:9; Monard 1937b:103, Roux-Estève 1974b:104; Wallach and Broadley 2009:41).

Kwanza Sul: “Quirimbo” [-10.68333, 14.26667] (Parker 1936:120); “Congulu” [-10.86667, 14.28333] (Parker 1936:120).

Benguela: “Quindumbo” [-12.46667, 14.93333] (Bocage 1893:117, 1895a:64, 1897a:198; Loveridge 1933:216, 1957:241; Monard 1937b:103, 104; Laurent 1964a:89, 1964c:414; Roux-Estève 1974b:104; Wallach and Broadley 2009:41); “Benguella” [-12.58333, 13.41667] (Boulenger 1915:196; Loveridge 1957:242); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:103, 105); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:70); “Cubal” [-13.03333, 14.25000] (Mer-



MAP 255. Distribution of *Afrotyphlops lineolatus* in Angola.

tens 1937a:11, 1938a:438); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:112; Roux-Estève 1974b:104). **Undetermined Locality:** (Günther 1876b:678; Ferreira 1900:50);. “Cuango” (Peters 1881:147) (Malanje Province impossible to georeference: See History Section for more detailed information).

Taxonomic and distributional notes: There was long confusion between this taxon and *Afrotyphlops punctatus* (Leach, 1819) as reflected in the complex synonymies/chresonymies of these two taxa (McDiarmid et al. 1999). Authorship of this species is sometimes attributed to Jan (1863) (e.g., McDiarmid et al. 1999), however, this use is as a *nomen nudum*. See Broadley and Wallach (2009) for comprehensive chresonymy and distribution in eastern and central Africa.

Afrotyphlops mucruso (Peters, 1854)

ZAMBEZI BLIND SNAKE

Onychocephalus mucruso Peters 1854:621. Lectotype: ZMB 3963 (collector W.C.H. Peters), designated by Loveridge (1933:216). Type locality: “Macanga” (Peters 1854:621), [= Makanga], Mozambique.

Typhlops mucruso: Boulenger (1893:46), Bocage (1895a:67).

Typhlops schlegelii mucruso: Loveridge (1933:216, 1957:241).

Typhlops schlegelii mucruso: Laurent (1950a:7, 1964a:90),

Rhinotyphlops schlegelii dinga (part): Roux-Estève (1974b:164).

Typhlops schlegelii mucruso: Broadley (1990:47).

Rhinotyphlops schlegelii (part): McDiarmid et al. (1999:84).

Rhinotyphlops mucruso: Spawls et al. (2004:292), Broadley and Cotterill (2004:45).

Megatyphlops mucruso: Broadley and Wallach (2009:52), Bates et al. (2014:313), Wallach et al. (2014:423).

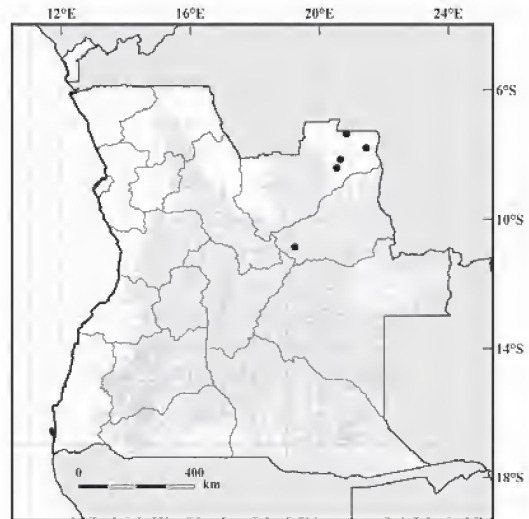
Afrotyphlops mucruso: Hedges et al. (2014:20).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from the savannas and forest-savanna mosaic from East Africa, from coastal Kenya south to central Mozambique, Zimbabwe and Limpopo Province, South Africa, and west through the southern provinces of the Democratic Republic of Congo to northeast Angola.

Ocurrences in Angola (Map 256): The species occurs in the extreme northeast of the country, in Lunda Norte and Sul provinces.

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1950a:7; Roux-Estève 1974b:178); “Muita” [-7.80000, 21.45000] (Laurent 1950a:7; “Camisombo” [-8.15000, 20.65000] (Laurent 1964a:89); “Calonda” [-8.41667, 20.53333] (Laurent 1964a:89). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:89).



MAP 256. Distribution of *Afrotyphlops mucruso* in Angola.

Taxonomic and distributional notes: See Roux-Estève (1974b), Bauer et al. (1995, 2002) and McDiarmid et al. (1999) for discussions of the original type series of *Onychocephalus mucruso*. Hedges et al. (2014) moved all species previously allocated to *Megatyphlops* Broadley and Wallach, 2009 to *Afrotyphlops* based on their phylogenetic analysis, which demonstrated that members of the former group are embedded within a clade containing the type specimen of the latter. Previously treated as a subspecies, *Rhinotyphlops schlegelii mucruso* (Peters, 1854), but elevated to full

species status and placed in the new genus *Megatyphlops* by Broadley and Wallach (2009). The status of large typhlopids in Angola previously assigned to *Megatyphlops* by Broadley and Wallach (2009) as *mucruso* and *schlegelii* remains problematic. See Broadley and Wallach (2009) for comprehensive chresonymy and maps of global distribution.

Afrotyphlops schlegelii (Bianconi, 1849)

SCHLEGEL'S GIANT BLIND SNAKE

Typhlops schlegelii Bianconi 1849:183, pl. 6, figs. 2, 2a-2d. Holotype: MZUB specimen numbers not known (collector C. Fornasini). Type locality: "Mozambico" [=Mozambique] (Inhambane, Mozambique *vide* Roux-Estève 1974b).

Typhlops (Onychocephalus) humbo Bocage 1886a:171. Syntypes: MBL 1887 [2 specimens], destroyed by fire 18 March 1978 (collector J.A. d'Anchieta). Type locality: "Quissange" Benguela Province, Angola.

Onychocephalus Petersii Bocage 1873a:248, pl. 1, fig. 3. Syntypes: MBL 1868 (2 specimens), destroyed by fire 18 March 1978 (collector J. Anchieta). Type locality: "Biballa" [= Bibala] Namibe Province, Angola.

Onychocephalus Schlegelii: Bocage (1873a:250).

Typhlops Petersii: Bocage (1886a:172, 1895a:68, 1897a:199).

Typhlops (Onychocephalus) humbo Bocage 1886a:171. Syntypes: MBL 1887 (2 specimens) (collector J. Anchieta), destroyed by fire 18 March 1978. Type locality: "Quissange" Benguela Province, Angola.

Typhlops humbo: Bocage (1887c:210, 1895a:66, 1897a:198), Boulenger (1893:46).

Typhlops hottentotus: Bocage 1893:117. Holotype: MBL 1867 (collector J. Anchieta), destroyed by fire 18 March 1978. Type locality: "Humbé" Cunene Province, Angola.

Typhlops hottentotus: Bocage (1895a:69, 1897a:198), Boulenger (1896:588).

Typhlops schlegelii mucruso: Loveridge (1933:216, 1957:241), Mertens (1938a:438).

Typhlops mucruso (= *humbo*, *hottentotus*, *petersii*): Monard (1937b:103).

Rhinotyphlops schlegelii petersii: Roux-Estève (1974a:495; 1974b:166), Branch (1998:54).

Typhlops schlegelii petersii: Broadley (1990:48).

Rhinotyphlops schlegelii (part): McDiarmid et al. (1999:84).

Megatyphlops schlegelii: Broadley and Wallach (2009:48), Bates et al. (2014:314), Wallach et al. (2014:423).

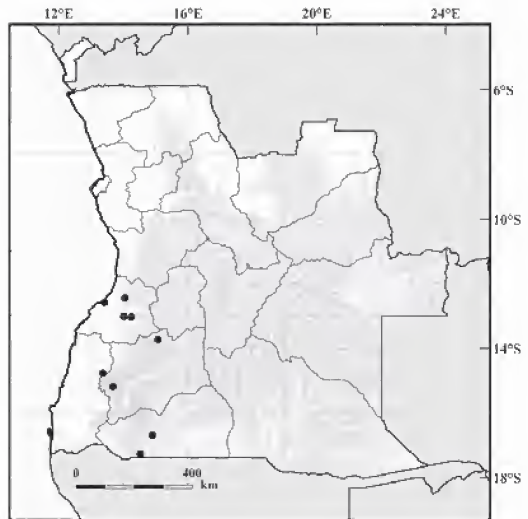
Afrotyphlops schlegelii: Hedges et al. (2014:20)

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southern Mozambique, northern KwaZulu-Natal to Swaziland, through the northeastern provinces of South Africa, central Botswana, northern Namibia and southwestern Angola.

Ocurrences in Angola (Map 257): The species occurs in southwestern Angola.

Benguela: "Quissange" [-12.43333, 14.05000] (Bocage 1886a:171, 1887c:210, 1895a:66, 1897a:198; Boulenger 1896:588; Loveridge 1933:216; Monard 1937b:103; Roux-Estève 1974:495, 1974b:180; Broadley and Wallach 2009:51); "Benguella" [-12.58333, 13.41667] (Boulenger 1893:46), "Caimbambo" [-13.01667, 14.01667] (Broadley and Wallach 2009:51); "Cubal" [-13.03333, 14.25000] (Mertens 1938:438). **Huíla:** "Caconda" [-13.73333, 15.06667] (Bocage 1895a:68; Monard 1937b:103); "10 km SE of Joao de Almeida" [-15.18333, 13.68333] (Broadley and Wallach 2009:51). **Namibe:** "Biballa"



MAP 257. Distribution of *Afrotyphlops schlegelii* in Angola.

[-14.76667, 13.36667] (Bocage 1873a:249, 252, 1886a:172, 1895a:68, 1897a:199; Loveridge 1933:216; Monard 1937b:103). **Cunene:** “Humbe, sur les bords du Cunene (Humbe)” [-16.68333, 14.90000] (Bocage 1893:117, 1895a:69; Boulenger 1896:588; Monard 1937b:103; Broadley and Wallach 2009:51); “Erickson’s Drift, Cunene river” [-17.26944, 14.525 E] (Broadley and Wallach 2009:51).

Taxonomic and distributional notes: There are three juvenile specimens referable to this species that are extant in the Bianconi collection of Mozambiquan reptiles in Bologna, but none of these seem to be consistent with the type specimen. The date of publication is often confused because the description appeared in the journal issue for August and September 1848, but was not published until April 1849, and because Bianconi (1850:183, pl. 6, fig. 2) published a second description, marked “Nobis” of the same animal. Further, Bianconi (1849) notes that he had described this species, and another, in the session of 1847, but this refers to the oral sessions of the Società Agraria, e dell’ Accademia delle Scienze dell’ Istituto di Bologna, for which the *Nuovi Annali delle Scienze Naturali* was the publication outlet. “Hedges et al. (2014) moved all species previously allocated to *Megatyphlops* Broadley and Wallach, 2009 to *Afrotyphlops* based on their phylogenetic analysis, which demonstrated that members of the former group are embedded within a clade containing the type specimen of the latter. Until recently, four subspecies were recognized under the name *Rhinotyphlops schlegelii* (*brevis*, *schlegelii*, *petersii*, *mucruso*) following Roux-Estève (1974b) and Hahn (1980). Currently *Onychocephalus petersii* (Bocage, 1873) is placed in the synonymy of *Afrotyphlops schlegelii* (Bianconi, 1849), whereas the others are recognized as valid species (Roux-Estève 1974a; 1974b; Broadley 1990; Branch 1998; Broadley and Wallach 2009). The complex nomenclatural history of this and related taxa, including the interpretation of type specimens has been reviewed by McDiarmid et al. (1999). See Broadley and Wallach (2009) for comprehensive chresonymy and maps of global distribution.

Afrotyphlops schmidtii (Laurent, 1956)

SCHMIDT’S BLIND-SNAKE

Typhlops schmidtii Laurent 1956:71, figs. 9–11, pl. 8, fig. 4. Holotype: MRAC 17996 (collector not mentioned). Type locality: “Nyunzu, Terr. D’Albertville, Tanganika” [= Nyunza, Tanganyika Province (formerly Katanga Province), Democratic Republic of Congo *vide* Wallach and Broadley 2009:43].

Typhlops schmidtii: Laurent (1964a:89), McDiarmid et al. (1999:119).

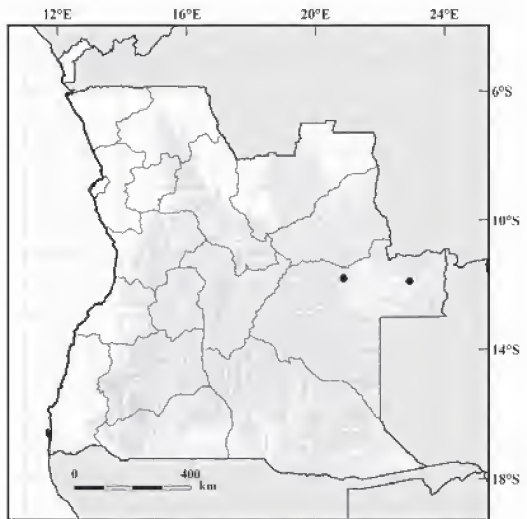
Rhinotyphlops schmidtii: Broadley et al. (2003:42), Broadley and Cotterill (2004:45)

Afrotyphlops schmidtii: Broadley and Wallach (2009:43), Wallach et al. (2014:15), Hedges et al. (2014:20).

Global conservation status (IUCN): Not Evaluated.

Global distribution: A savanna species distributed in eastern Angola, through northern Zambia and southern Democratic Republic of Congo (Katanga provinces).

Occurrences in Angola (Map 258): The species occurs in eastern Angola. **Moxico:** “environs du lac Calundo, village du chef Sá-Mussamba (environs du lac Calundo)”



MAP 258. Distribution of *Afrotyphlops schmidtii* in Angola.

[-11.80000, 20.86667] (Laurent 1964a:89; Broadley and Wallach 2009:43); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:89; Broadley and Wallach 2009:43).

Taxonomic and distributional notes: The type locality of *Typhlops schmidt* in the Tanganyika district (now province) of the Democratic Republic of Congo, has been misinterpreted by some subsequent authors to refer to Tanzania (e.g., McDiarmid et al. 1999). Laurent (1964a) was the first to cite this species from Angola. See Broadley and Wallach (2009) for chresonymy and maps of global distribution.

Genus *Letheobia* Cope, 1868

Letheobia praeocularis (Stejneger, “1893” 1894)

LÉOPOLDVILLE BEAKED SNAKE

Typhlops praeocularis Stejneger “1893” 1894:709. Holotype: USNM 20799 (collector J.H. Camp). Type locality: “Leopoldville, or Stanley Pool, Congo Free State” [= Kinshasa or Malebo Pool], Democratic Republic of Congo.

Typhlops praeocularis lundensis Laurent 1964a:90. Holotype: MD 5929 (collector “Indigènes divers” = various native collectors). Type locality: “Dundo, Lunda,” Lunda Norte, Angola.

Rhinotyphlops praeocularis: Roux-Estève (1974a:498, 1974b:204), McDiarmid et al. (1999:83).

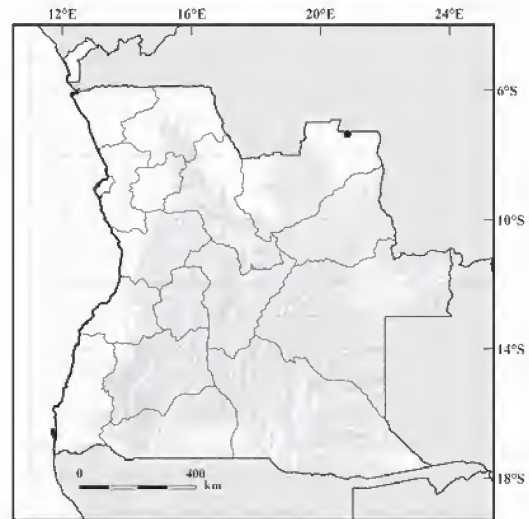
Letheobia praeocularis: Chirio and LeBreton (2007:328), Broadley and Wallach (2009:66), LeBreton (2010), Wallach et al. (2014:373), Hedges et al. (2014:21).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from western and central Africa, ranging from Southern Congo to southwestern Democratic Republic of Congo throughout northeastern Angola and probably Nigeria.

Occurrences in Angola (Map 259): The species occurs in northeastern Angola. **Lunda Norte:** “Dundo, Lunda” [-7.36667, 20.83333] (Laurent 1964a:90; Roux-Estève 1974a:498, 1974b:204).

Taxonomic and distributional notes: Laurent (1964a) described *Typhlops praeocularis lundensis* based on five specimens from “Dundo,” Angola, later considered a synonym of the typical form (Roux-Estève 1974a, 1974b). Broadley and Wallach (2007a) revived the genus *Letheobia* from the synonymy of *Rhinotyphlops* Fitzinger, 1843, but did not include *L. praeocularis* in their study.



MAP 259. Distribution of *Letheobia praeocularis* in Angola.

Family Leptotyphlopidae Stejneger, 1892

Genus *Leptotyphlops* Fitzinger, 1843

Leptotyphlops kafubi (Boulenger, 1919)

SHABA THREAD SNAKE

Glaucania kafubi Boulenger 1919b:186. Syntypes: BMNH 1946.1.11.7–8, formerly BMNH 1919.8.26.13–14, MRAC 2085 (collector L. Stappers). Type locality: “la rivière Kafuboo, à Elisabethville” [= Kafubu River, Lubumbashi, Haut-Katanga Province (formerly Katanga Province)], Democratic Republic of Congo.

Leptotyphlops emini emini (part): Laurent (1964a:91).

Leptotyphlops nigricans nigricans (part): Broadley and Watson (1976:490).

Leptotyphlops nigricans (part): McDiarmid et al. (1999:39).

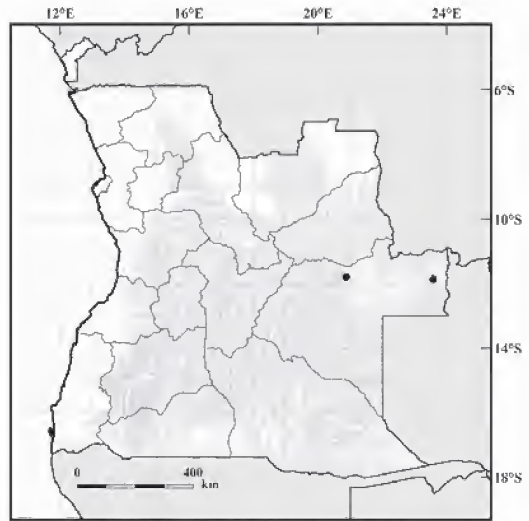
Leptotyphlops kafubi: Broadley and Broadley (1999:18), Broadley and Wallach (2007b:11), Wallach et al. (2014:368).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southeastern Africa, from eastern Angola, the former Katanga Province, Democratic Republic of Congo to Zambia, Malawi and Zimbabwe.

Occurrences in Angola (Map 260): The species has been recorded from eastern Angola. **Mexico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:91; Broadley and Watson 1976:490; Broadley and Broadley 1999:18); “Chutes de la Luisavo, Cabinda, Haut Zambèze” [-11.86667, 23.58333] (Laurent 1964a:91; Broadley and Watson 1976:490; Broadley and Broadley 1999:18).

Taxonomic and distributional notes: Broadley and Watson (1976) provided a map with the Angolan records from Laurent (1964a) assigned to *Leptotyphlops nigricans* (Schlegel, 1839). They described the species range of *L. nigricans* as discontinuous, with the nominate population occurring in the southern Cape Province (now Western and Eastern Cape provinces, South Africa), with a small group of locality records in the central portion of the former Transvaal Province separated by a wide gap from the remainder of the distribution, which extends north from central Zambia through eastern Angola to Uganda and South Sudan (Broadley and Watson 1976). Broadley and Broadley (1999) formally diagnosed the *L. nigricans* group, including the southern African species *L. jacobsoni* Broadley and Broadley, 1999, *L. kafubi* (Boulenger, 1919) and *L. nigricans*. They also restricted *L. nigricans* to the southern Cape provinces of South Africa and used *L. kafubi* as a new combination and attributed to it the Angolan records previously assigned to *Leptotyphlops emini emini*.



MAP 260. Distribution of *Leptotyphlops kafubi* in Angola.

Leptotyphlops scutifrons (Peters, 1854)

PETERS' THREAD SNAKE

Stenostoma scutifrons Peters 1854:621. Holotype: ZMB 4826, lost *vide* Broadley and Watson (1976), Hahn (1980) and Bauer et al. (1995, 2002) (collector W.C.H. Peters). Type locality: “Sena” (Peters 1854:621), [= Vila da Sena, Zambezi River], Mozambique.

Stenostoma scutifrons (part): Peters (1865:261), Bocage (1873b:251, 1895a:71).

Stenostoma nigricans (part): Bocage (1866a:46).

Glauconia scutifrons (part): Ferreira (1904:114), Boulenger (1905:112, 1915:198), Monard (1937b:106).

Leptotyphlops conjuncta distant (part): Bogert (1940:13).

Leptotyphlops scutifrons scutifrons (part): Broadley and Watson (1976:497), Broadley and Broadley (1999:23).

Leptotyphlops scutifrons (part): McDiarmid et al. (1999:41).

Leptotyphlops scutifrons: Bates et al. (2014:321), Wallach et al. (2014:364).

Leptotyphlops scutifrons complex: Conradie et al. (2016:23).

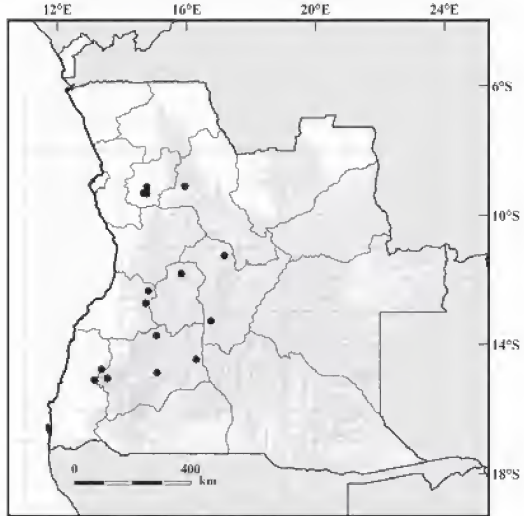
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from western and central Angola, across Zambia and Malawi to southern Tanzania and Mozambique, and south through Namibia, Botswana and Zimbabwe to Swaziland and KwaZulu-Natal and the Eastern Cape in South Africa.

Occurrences in Angola (Map 261): The species occurs in western Angola. **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:46; 1873b:251, 1895a:71; Monard 1937b:106). **Kwanza Norte:** “Golungo Alto” [-9.13333, 14.76667] (Ferreira 1903:114; Monard 1937b:106); “Zembe” [-9.31667, 14.66667] (Ferreira 1904:114; Monard 1937b:106); “Cazengo” [-9.33333, 14.76667] (Ferreira 1904:114; Monard 1937b:106). **Bié:** “Chitau” [-11.25000, 17.16667] (Bogert 1940:13; Broadley and Broadley 1999:26); “Cubango basin (13)” [-13.28061, 16.74722] (Conradie et al. 2016:8-9, 23). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:106). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:71; Monard 1937b:106); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:106).

Huíla: “Caconda” [-13.73333, 15.06667] (Bocage 1895a:71; Monard 1937b:106); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:106); “Kapelongo” [-14.88333, 15.08333] (Monard 1937b:106); “Huilla (Huila)” [-15.05000, 13.55000] (Bocage 1895a:71; Monard 1937b:106). **Namibe:** “Biballa (Bibala)” [-14.76667, 13.36667] (Bocage 1873b:251, 1895a:71; Monard 1937b:106); “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:71; Monard 1937b:106).

Taxonomic and distributional notes: Bauer et al. (1995) incorrectly regarded ZMB 5706 as a possible syntype. Adalsteinsson et al. (2009) recently identified numerous undescribed cryptic species within the *L. scutifrons/incognitus/conjunctus* complex that will require detailed analysis to stabilize the taxonomy of the group (Bates et al. 2014). The generic map for *Leptotyphlops* provided by Adalsteinsson et al. (2009) shows no species in Angola except in far southeastern Cuando Cubango and in eastern Moxico. Some of the specimens referenced in the works cited above may be referable to *Namibiana latifrons*, so surviving material must be examined.



MAP 261. Distribution of *Leptotyphlops scutifrons* in Angola.

Genus *Namibiana* Hedges, Adalsteinsson and Branch, 2009

Namibiana labialis (Sternfeld, 1908)

DAMARA THREAD SNAKE

Glauconia labialis Sternfeld 1908:92. Holotype: ZMB 21691 (collector O. Dempwolff). Type locality: “Outgo (D. S. W. Africa)” (Sternfeld 1908:92), [= Outjo, Kunene Region], Namibia.

Leptotyphlops labialis Broadley and Broadley (1999:14), McDiarmid et al. (1999:34).

Namibiana labialis: Adalsteinsson et al. (2009:13), Wallach et al. (2014:464).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southwestern Angola and northern Namibia.

Occurrences in Angola: The species is known from southern Angola, in Cunene Province near the Namibian border. **Cunene:** “Miranda” (Broadley and Broadley 1999:14).

Taxonomic and distributional notes: Most authors considered the holotype of this taxon to be lost or unidentified (e.g., McDiarmid et al. 1999; Bauer et al. 2002), however, ZMB 21691, although not marked as a type in the ZMB catalogue, is fully consistent with the description. Adalsteinsson et al. (2009) found deep genetic divergence between *Leptotyphlops occidentalis* and other species of *Leptotyphlops*. On this basis and on evidence from shared morphology they designated a new genus, *Namibiana* for members of the *Leptotyphlops rostrata* (Bocage, 1866) group (*sensu* Broadley and Broadley 1999), to which *L. occidentalis* belongs.

***Namibiana latifrons* (Sternfeld, 1908)**

BENGUELA THREAD SNAKE

Glauconia latifrons Sternfeld 1908:93. Lectotype: BMNH 64.6.14.5 (collector J.J. Monteiro) designated by Broadley and Watson (1976). Type locality: “Benguela”, Benguela Province, Angola.

Stenostoma nigricans (part): Bocage (1867b:224).

Glauconia scutifrons (part): Boulenger (1893:68).

Stenostoma scutifrons (part): Peters (1865:262), Bocage (1895a:71). See notes below regarding Peters’ (1865) application of names.

St[enostoma]. scutatum Peters (1865:262), unavailable name (see notes below).

Glauconia latifrons: Monard (1937b:106).

Leptotyphlops scutifrons (part): Bauer et al. (1995:77, 2002:169), McDiarmid et al. (1999:41).

Leptotyphlops latifrons: Broadley and Broadley (1999:14).

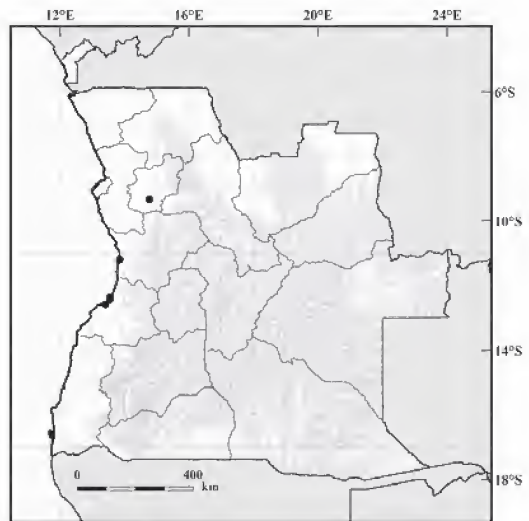
Namibiana latifrons: Adalsteinsson et al. (2009:13), Wallach et al. (2014:464).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from western Angola and southwestern Democratic Republic of Congo (Bas-Congo).

Occurrences in Angola (Map 262): The species occurs in western Angola. **Kwanza Sul:** “Novo Redondo” [-11.20000, 13.85000] (Bocage 1867b:224; 1895a:71; Monard 1937b:106). **Benguela:** “Lobito Bay” [-12.35000, 13.55000] (Broadley and Broadley 1999:14); “Catumbella” [-12.43333, 13.55000] (Bocage 1867b:224; 1895a:71; Monard 1937b:106; Broadley and Broadley 1999:14); “Benguella” [-12.58333, 13.41667] (Peters 1865:621, Boulenger 1893:68; Bauer et al. 1995:77; Broadley and Broadley 1999:14; Wallach et al. 2014:464).

Taxonomic and distributional notes: Peters (1854) described *Stenostoma scutifrons* from the type locality “Sena” in Mozambique. Boulenger (1893) later allocated two specimens from “Benguella” to this taxon. Sternfeld (1908) recognized that the east and west African forms were distinctive from one another and proposed the name *latifrons* for the Angolan material. Boundy (2014) made the case that Peters himself had validly proposed the name *Stenostoma scutatum* Peters (1865) for the same Benguela material examined by Boulenger (1893), despite the fact that Peters ultimately concluded that the Mozambiquan and Angolan specimens were conspecific and assignable to *S. scutifrons*. However, because Peters’ name had not been used subsequently and *Glauconia latifrons* Sternfeld, 1908 had



MAP 262. Distribution of *Namibiana latifrons* in Angola.

been in continuous use for over a century, Boundy (2014) argued that the former name should be treated as a *nomen oblitum* and the later as a *nomen protectum*, although he did not use those terms. Although Boundy (2014) invoked Article 11 of the *International Code of Zoological Nomenclature* to support his interpretation of the availability of Peters' name for this taxon, we disagree. Article 11.5 states "To be available, a name must be used as valid for a taxon when proposed, unless it was first published as a junior synonym and subsequently made available under the provisions of Article 11.6.1." As *S. scutatum* was first proposed as a synonym and was not treated as an available name prior to 1961, it is unavailable under the *Code*. Bauer et al. (1995) incorrectly included "Benguella [Angola] (Westafrika)" as part of the type locality for *S. scutifrons* (Bauer et al. 2002). Adalsteinsson et al. (2009), transferred *latifrons* to the new genus *Namibiana*. It is possible that some specimens from western Angola currently assigned to *Leptotyphlops scutifrons* may represent this species, and such material should thus be carefully reexamined.

Namibiana rostrata (Bocage, 1886)

ANGOLAN BEAKED THREAD SNAKE (Endemic)

Stenostoma rostratum: Bocage 1886a:173. Holotype: MBL specimen number unknown (collector J. d'Anchieta), destroyed by fire 18 March 1978. Type locality: "envoyé du Humbe, sur les bords du Cunene" [= Humbe] Cunene Province, Angola.

Stenostoma rostratum: Bocage (1895a:71, 1897a:199).

Glauconia rostrata: Boulenger (1915:198).

Leptotyphlops rostratus: Broadley and Broadley (1999:18), McDiarmid et al. (1999:40).

Namibiana rostrata: Bates (2010), Wallach et al. (2014:464).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is endemic to Angola.

Ocurrences in Angola (Map 263): The species is known from western portions of the country, from the type locality, "Humbe" north to "Luanda." **Malanje:** "Vana e Lumbe" (Broadley and Broadley 1999:18). **Luanda:** "Luanda" [-8.83333, 13.26667] (Broadley and Broadley 1999:18). **Huíla:** "W of Huíla" [-15.05000, 13.55000] (Broadley and Broadley 1999:18). **Cunene:** "envoyé du Humbe, sur les bords du Cunene (Humbe)" [-16.68333, 14.90000] (Bocage 1886a:173, 1895a:71, 1897a:199; Broadley and Broadley 1999:18; Wallach et al. 2014:464). **Undetermined Locality:** "without precise location" (Bocage 1895a:71; Boulenger 1915:198; Broadley and Broadley 1999:18).

Taxonomic and distributional notes:

Broadley and Broadley (1999) provided some new data for the species in Angola, increasing the distribution range further north from the type locality. The generic map for *Namibiana* provided by Adalsteinsson et al. (2009) shows no species occurring north of Kwanza Sul.



MAP 263. Distribution of *Namibiana rostrata* in Angola.

Family Pythonidae Fitzinger, 1826**Genus *Python* Daudin, 1803*****Python anchietae* Bocage, 1887****ANCHIETA'S DWARF PYTHON**

Python Anchietae Bocage 1887d:87. Syntypes: MBL T89-1206, T89-1207 (collector J. d'Anchieta), destroyed by fire 18 March 1978. Type locality: "Catumbella" [= Catumbela] Benguela Province, Angola.

Python Anchietae: Bocage (1895a:73, 1897a:199).

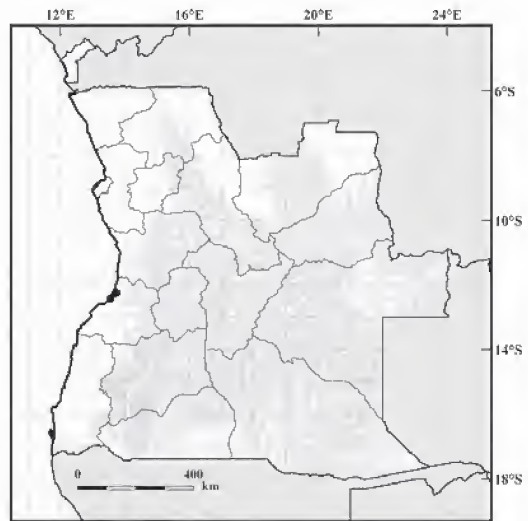
Python anchietae: Boulenger (1893:88, 1915:199), Monard (1937b:108), Bogert (1940:18), Frade (1963:253), Laurent (1964a:92), Branch (1998:59), Wallach et al. (2014:607).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southern Angola and central and northern Namibia.

Ocurrences in Angola (Map 264): The species is known from the southwestern Angola regions of Angola. **Benguela:** "Hanha road, 18 km from Lobito" [-12.26667, 13.70000] (Laurent 1964a:92); "Catumbella" [-12.43333, 13.55000] (Bocage 1887d:87, 1895a:73, 1897a:199; Boulenger 1893:88, 1915:199; Monard 1937b:108; Wallach et al. 2014:607); "Hanha" [-12.25000, 13.75000] (Bogert 1940:18).

Taxonomic and distributional notes: This species was described by Bocage (1887d) based on two specimens from "Catumbella" collected by Anchieta. Anchieta's Dwarf Python is poorly recorded in the country and the current gaps in its distribution should be considered artifactual. The IUCN map of its distribution (<http://maps.iucnredlist.org/map.html?id=177539>) is entirely incorrect for all but the southernmost part of the species range.



MAP 264. Distribution of *Python anchietae* in Angola.

Python natalensis* Smith, 1840*SOUTHERN AFRICAN ROCK PYTHON**

Python sebae natalensis Smith 1840: pl. 9, first of three accompanying unnumbered text pages. Syntypes: BMNH 1946.1.8.3 (formerly 1940.3.27.1) and 1946.1.17.13 (formerly 1940.3.27.2) (*vide* Broadley 1984). Type locality: none explicitly stated, although it is "not to be found within hundreds of miles of the boundaries of the [Cape] Colony, and few specimens have been obtained nearer than Port Natal. " Given the specific epithet, the terra typical may be interpreted as Port Natal.

Python natalensis: Bocage (1895a:72, 1896a:112), Branch (1998:59), Broadley (1999:31), Broadley and Cotterill (2004:45), Bates et al. (2014:328), Ceriaco et al. (2014b:672, 2016a:40), Wallach et al. (2014:609), Conradie et al. (2016:23).

Python sebae: Monard (1937b:108), Mertens (1938a:439), Bogert (1940:17, 18), Themido (1941:9), Machado (1979:10, 46), Spawls and Branch (1995:19), Bellosa et al. (2007:30).

Python sebae natalensis: Broadley (1984:362).

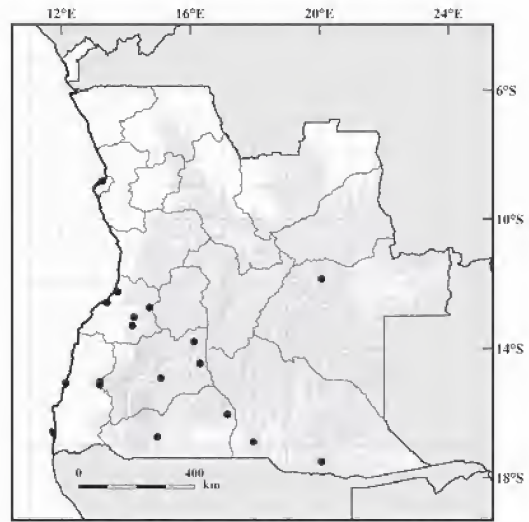
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species ranges across south-central Africa from Angola southeast to South Africa and north to the southeastern Democratic Republic of Congo, Burundi, Tanzania and the Kenya highlands.

Occurrences in Angola (Map 265): Published Angolan records are mostly from southern and western parts of the country. **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1895a:72; Broadley 1984:364). **Moxico:** “Moxico” [-11.85000, 20.06667] (Machado 1979:10). **Benguela:** “Benguella” [-12.58333, 13.41667] (Bocage 1895a:72; Broadley 1984:364); “sighting in Ebanga” [-12.73333, 14.73333] (Monard 1937b:108); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:439); “Hanha” [13.30000, 14.20000] (Bocage 1896a:112; Themido 1941:9), “Hanha (North)” [-12.25000, 13.75000] (Bogert 1940:17). **Huíla:** “Galange” [-13.80000, 16.11667] (Monard 1937b:108); “Vila-da-Ponte” [-14.46667, 16.30000] (Monard 1937b:108); “Capelongo” [-14.91667, 15.08333] (Bogert 1940:17; Broadley 1984:364). **Namibe:** “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:72; Broadley 1984:364); “Rio Giraul” [-15.06833, 12.14222] (Bocage 1896a:112; Broadley 1984:364); “Beginning of the forested areas, at the start of the climb to Leba Pass (by road), near Bruco village” [-15.12106, 13.18654] (Ceríaco et al. 2016:40). **Cunene:** “Chimporo” [-16.03333, 17.15000] (Monard 1937b:108; Broadley 1984:364); “sighting in Forte Roçadas” [-16.73333, 14.98333] (Monard 1937b:108). **Cuando Cubango:** “Cubago basin (1)” [-16.89413, 17.95766] (Conradie et al. 2016:8-10, 23); “Cuito basin (30a)” [17.50875, 20.06594] (Conradie et al. 2016:9, 10, 23).

Taxonomic and distributional notes: Smith (1833) first used the name *Python Natalensis* as a *nomen nudum*, giving the locality “from the interior, eastwards of Latakoo [and] in the country about Port Natal” [= east of Kuruman, Northern Cape, South Africa and around Durban, KwaZulu-Natal], which is given as the type locality by Wallach et al. (2014). Interestingly, Smith (1840) cited the first use of the name as being on page 64 of the *South African Quarterly Journal* for October 1833. This is indeed a page in an Andrew Smith paper, but the paper deals exclusively with mammals and page 64 treats elephant shrews specifically (Broadley 1984). The same citation to the original description was provided by McDiarmid et al. (1999). Stimson (1969) considered the terra typica unknown and the types untraced. Wallach et al. (2014) likewise considered that no type had been designated, but considered the specimens to have been associated with the “Cape Town Zool. Soc. Mus.” Although Smith was associated with the nascent South African Museum, the bulk of his herpetological material that has survived was deposited either in London or Edinburgh (FitzSimons 1937; Branch and Bauer 2005). Broadley (1984) indicated that both syntypes were rolled skins preserved in alcohol. The BMNH register notes both from Port Natal, with BMNH 1946.1.8.3 donated by Andrew Smith and BMNH 1946.1.17.13 without a stated collector and noted as “found as stuffed specimen in dry coll.”

Python natalensis was for a long time considered as a synonym or subspecies of *Python sebae* (Gmelin, 1789) (Broadley 1984), but was elevated to specific status by Broadley (1999) based on morphological differences as well the evidence of the overlap in distribution (Broadley and Cotterill 2004). Broadley (1984), Spawls and Branch (1995) and Bellosa et al. (2007) provided maps with the distribution ranges for both species, in which *Python natalensis* occurs in central and



MAP 265. Distribution of *Python natalensis* in Angola.

south Angola, bordered in the north by the Kwanza River and overlapping in Luanda Province with *Python sebae*, which occurs in northern regions of Angola, including the enclave of Cabinda.

Python sebae (Gmelin, 1789)

AFRICAN ROCK PYTHON

Coluber Sebae Gmelin 1789:1118. Syntypes: specimen described and illustrated by Seba (1735:105, pl. 99, fig. 2) and specimen described by Gronovius (1756:56) Type locality: “Brasiliensis, è regione Guairã” [= Guira, Brazil], Brazil.

Python Sebae: Bocage (1866a:47, 1867b:224).

Python sebae: Peters (1877:614), Laurent (1954a:38, 1964a:91), Hellmich (1957a:70), van den Audenaerde (1966:32), Machado (1979:10), Haacke (1982b:8), Spawls and Branch (1995:19), Bellosa et al. (2007:30).

Python sebae sebae: Broadley (1984:362), Broadley (1999:31), Wallach et al. (2014:611).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is very widespread in sub-Saharan Africa, from southern Mauritania to southern Chad, South Sudan and Ethiopia, south to Tanzania and Rwanda with its southern limit in northern Angola and the southern Democratic Republic of Congo.

Occurrences in Angola (Map 266): The species distribution is limited to the northern regions of the country. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:614). **Bengo:** “Nambuanguongo” [-7.97438, 14.18924] (Machado 1979:10); “Ambriz” [-7.844312, 13.106493] (Broadley 1984:362). **Kwanza Norte:** “Rio Cuanza, nahe Mucoso” (Hellmich 1957a:70). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:38, 1964a:91; Thys van den Audenaerde 1966:32; Broadley 1984:362). **Lunda Sul:** “Saurimo” [-9.65000, 20.40000] (Haacke 1982b:8). **Undetermined Locality:** “Without precise location” (Bocage 1866a:47, 1867b:224; Laurent 1964a:91).

Taxonomic and distributional notes:

Gmelin (1789) gave two indications to older works in his description of *Coluber Sebae*: “Gron. Mus. 2. N. 11” and “Seb. mus. 2. t. 199. f. 2,” although he provides only one set of scale counts: 272 ventrals and 70 caudals, corresponding to Gronovius’s specimen. This implies that there were two original syntypes, not a single holotype as incorrectly stated by McDiarmid et al. (1999). Loveridge (1957) referred to the specimen figured by Seba as the type and Wallach et al. (2014) cited this specimen as the lectotype. However, as no pre-2000 work appears to have explicitly recognized this as a lectotype designation, both specimens must still be considered syntypes. The Seba specimen has been stated to be in Uppsala (Stimson 1969; McDiarmid et al. 1999), but its actual whereabouts are unknown. The history of Seba’s collections have been discussed in detail (Engel 1937, 1961; Boeseman 1970; Juriev 1981; Adler 1989; Bauer 2002; Bauer and Günther 2013). Seba’s second collection (the first had been sold to Peter the Great of Russia in 1716; Driessen-van het Reve 2006) was sold after his death at auction (Anonymous 1752). Seba specimens are known or believed to be present in collections in St. Petersburg, London, Leiden (including specimens until recently in Amsterdam), Paris, Copenhagen, Stockholm, Bremen and Berlin (Boeseman 1970; Juriev 1981; Thireau et al. 1998; Bauer



MAP 266. Distribution of *Python sebae* in Angola.

and Günther 2013) but few can be traced to particular plate figures, and the lectotype of *Python sebae* is not among these. Likewise, the specimen noted by Gronovius (1756) is also untraceable. His collection was dispersed as a result of an auction held in Leiden in 1778 (Wheeler 1958). Gronovius referred to Seba's plate in his own work and repeated the locality "Brasiliensis, è regione Guairã," however, his measurements and scale counts were based on a specimen in his own collection. FitzSimons (1962) and McDiarmid et al. (1999) incorrectly gave the type locality as "America" and the former author corrected this to "America." The extraordinary confusion over the type specimens and localities of both *P. natalensis* and *P. sebae* suggest that most modern authors have relied on secondary sources for their information. Spawls and Branch (1995:19) and Bellosa et al. (2007) provided a map with the distribution ranges for both large species of Angolan *Python* in which *P. sebae* is limited to the northern regions of Angola from northern Moxico to Luanda, where it overlaps with *Python natalensis*, which occurs in central and south Angola.

Family Boidae Gray, 1825

Genus *Calabaria* Gray, 1858

Calabaria reinhardtii (Schlegel, 1851)

CALABAR GROUND BOA

Eryx reinhardtii Schlegel 1851:1, pl. Holotype: ZMB 1471 (collector H. Halleur, don. J.T. Reinhardt). Type locality: "possessions danoises à la Côte d'or" (Schlegel 1851:2), [= Ghana], restricted to "Aqua Pim" [= Akwapim], Ghana by Hughes and Barry (1969:1010) on the basis of data associated with specimen.

Calabaria Reinhardtii: Bocage (1895a:74).

Calabaria reinhardtii: Frade (1963:252).

Calabaria reinhardtii: Chirio and LeBreton (2007:364), Wallach et al. (2014:130).

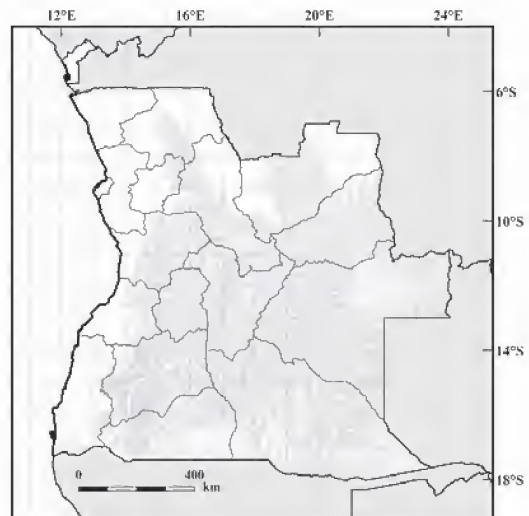
Charina reinhardtii: McDiarmid et al. (1999:203).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from West and Central Africa, from Guinea to Cameroon and Central African Republic, south to the Democratic Republic of Congo.

Occurrences in Angola (Map 267): The species occurs in the Cabinda enclave. **Cabinda:** "Cabinda" [-5.55000, 12.18333] (Frade 1963:252).

Taxonomic and distributional notes: Stimson (1969) and McDiarmid et al. (1999) considered the type untraced. Bauer et al. (2002) demonstrated that the specimen was in Berlin, not in Leiden as many had supposed. Although Stimson (1969) provided the correct year of description (1851) he provided the wrong volume of the *Bijdragen tot de Dierkunde* (vol. 1). Subsequent authors have cited both the wrong year (1848) and the wrong volume number (vol. 1 instead of vol. 3) (McDiarmid et al. 1999; Wallach et al. 2014). Most recent literature does not include "Cabinda" in the distribution of *Calabaria reinhardtii* (McDiarmid et al. 1999; Chirio and LeBreton 2007; Wallach et al. 2014), however, the proximity and biotic affinities of Cabinda to West and Central Africa account for its presence there.



MAP 267. Distribution of *Calabaria reinhardtii* in Angola.

Family Viperidae Oppel, 1811

Genus *Atheris* Cope, 1862*Atheris squamigera* (Hallowell, “1854” 1855)

VARIABLE BUSH VIPER

Echis squamigera Hallowell “1854” 1855:193. Holotype: ANSP 6949 (collector M.P. Bellonni-Duchaillu).

Type locality: “Near the river Gaboon, Guinea” (Hallowell “1854” 1855:193), Gabon River, Gabon.

Atheris squamigera: Peters (1881:150), Bocage (1887a:189, 1895a:152), Laurent (1954a:62), Loveridge (1957:304), Frade (1963:252), Spawls and Branch (1995:99), Broadley (1998a:128), Ernst and Rödel (2002:55), Chirio and LeBreton (2007:596), Dobiey and Vogel (2007:100), Wallach et al. (2014:62)

Atheris Lucani: Rochebrune (1885:89).

Atheris squamigera: Boulenger (1905:114, 1915:222), Ferreira (1906:169).

Atheris squamigera squamigera (Hallowell): Laurent (1954a:62), Hellmich (1957b:76), Manaças (1981:39).

? *Atheris squamigera squamigera* (Hallowell): Laurent (1964a:128).

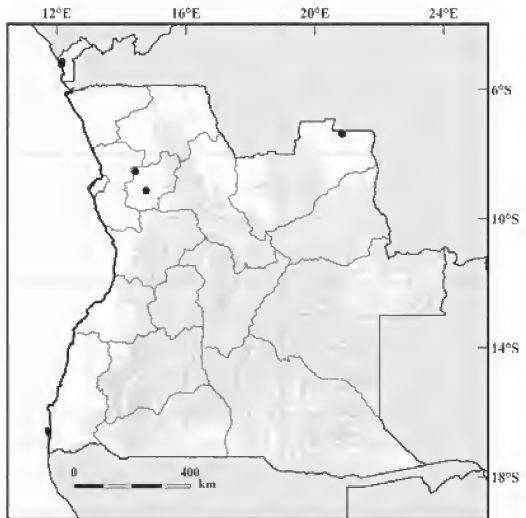
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is endemic to West and Central Africa.

Occurrences in Angola (Map 268): The species occurs in northern Angola, including the Cabinda enclave. **Cabinda:** “Foz do Luan-go” [-5.15000, 12.16667] (Manaças 1981:39); “Landana” [-6.21667, 12.15000] (Rochebrune 1885:90, Loveridge 1957:304, Manaças 1981:39). **Lunda Norte:** “Riv. Kundueji, environs de Dundo, Lunda” [-7.36667, 20.83333] (Laurent 1964a:128); “Dundo, rives de la Luachimo” [-7.38333, 20.85000] (Laurent 1954a:62; Manaças 1981:39); “forêt de la Luachimo” [-7.38333, 20.85000] (Laurent 1964a:128). **Kwanza Norte:** “Piri-Dembos” [-8.53333, 14.43333] (Hellmich 1957b:76; Manaças 1981:39); “Golungo Alto” [-9.13333, 14.76667] (Boulenger 1905:114; Ferreira 1906:169; Manaças 1981:39). **Undetermined Locality:** “Cuango” (Peters 1881:150; Bocage 1887a:189; 1895a:152; Manaças 1981:39)

(Malanje Province impossible to georeference: See History Section for more detailed information).

Taxonomic and distributional notes: The date of the description of this taxon has variably been given as 1854, 1855 (Wallach et al. 2014), or 1856 (McDiarmid et al. 1999; Broadley 1998a). Although the contents of volume 7 of the *Proceedings of the Academy of Natural Sciences of Philadelphia* covers the years 1854 and 1855 and the printed cover page indicates 1856, part V of the volume, in which Hallowell’s paper appeared, was printed in 1855. Several taxonomic revisions of the genus *Atheris* Gray, 1842 were undertaken by Broadley (1996a, 1998a), but the taxonomic status of several entities remain to be established (Ernst and Rödel 2002). A re-examination of museum specimens is necessary to determine if *Atheris squamigera* (Hallowell, “1854” 1855) is a geographically variable species or a species complex (Broadley 1998a; B. Hughes in Ernst and Rödel 2002).



MAP 268. Distribution of *Atheris squamigera* in Angola.

Genus *Bitis* Gray, 1842*Bitis arietans* (Merrem, 1820)

PUFF ADDER

Vipera (Echidna) arietans Merrem 1820:152. Lectotype: specimen described and illustrated by Seba (1735:55, pl. 54, fig. 4), now lost (collector unknown), designated by Wallach et al. (2014:611). Type locality: “Vorgebürge der guten Hoffnung/Promontorio bonae spei” (Merrem 1820:152), [= Cape of Good Hope] Western Cape Province, Southern South Africa.

Echidna arietans: Bocage (1866a:53).

Clotho arietans: Günther (1865a:480).

Echida arietans: Bocage (1879c:89).

Bitis arietans: Bocage (1887a:190, 1887c:211), Ferreira (1897b:245), Boulenger (1915:221), Schmidt (1933:15), Loveridge (1936a:45), Monard (1937b:141-142), Themido (1941:11), Hellmich (1957a:75), Spawls and Branch (1995:114), Branch (1998:114), Lenk et al. (1999:31), Dobiey and Vogel (2007:104), Barlow et al. (2013:1134), Wallach et al. (2014:89), Branch and Conradie (2015:200), Ceriaco et al. (2016a:87), Conradie et al. (2016:23).

Vipera arietans: Bocage (1895a:149, 1896a: 113).

Cobra lachesis: Mertens (1937a:16).

Bitis lachesis: Mertens (1938a:442), Bogert (1940:99), Laurent (1950a:11, 1954a:62).

Bitis arietans arietans: Hellmich (1957b:74), Laurent (1964a:127), Thys van den Audenaerde (1966:36), Manaças (1981-82:35), Branch and McCartney (1992:2), Bates et al. (2014:331).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from most of sub-Saharan Africa, extending to the Arabian Peninsula.

Ocurrences in Angola (Map 269): The species occurs in the entire country with exception of the desert regions of the far south-west, as well as some mountainous areas.

Zaire: “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:190, 1895a:149; Manaças 1981:35).

Bengo: “Ambriz” [-7.844312, 13.106493] (Manaças 1981:35).

Kwanza Norte: “Mucoso, Dondo” [-9.53333, 14.65000] (Hellmich 1957a:75; Manaças 1981:35).

Malanje: “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:53, 1895a:149; Monard 1937b:141; Manaças 1981:35); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016a:87).

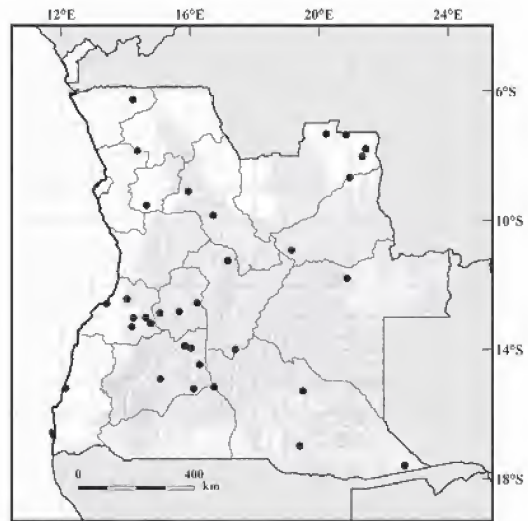
Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1950a:11, 1954a:62, 1964a:127; Manaças 1981:35); “Capaia” [-7.33556, 20.21681] (Branch and Conradie 2015:200); “Muíta, Luembe E” [-7.80000, 21.45000] (Laurent 1950a:11, 1954a:62; Manaças 1981:35); “Sombo” [-8.68333, 20.95000] (Laurent 1954:62); “Maludi” [-8.03333, 21.33333] (Thys van den Audenaerde 1966:36).

Lunda Sul: “Alto Chicapa” [10.93333, 19.15000] (Laurent 1964a:127; Manaças 1981:35).

Moxico: “environs du lac Calundo (Lago Calundo)” [-11.80000, 20.86667] (Laurent 1964a:127; Manaças 1981:35).

Bié: “Chitau” [-11.25000, 17.16667] (Schmidt 1933:15; Bogert 1940:99; Manaças 1981:35); “Cubango basin (9)” [-14.00269, 17.40500] (Conradie et al. 2016:8-9, 23).

Huambo: “Bela Vista” [-12.56667, 16.21667] (Manaças 1981:35; Hellmich 1957b:74); “Huambo” [-12.83333, 15.66667]



MAP 269. Distribution of *Bitis arietans* in Angola.

(Bogert 1940:99; Themido 1941:11; Manaças 1981:35); “Cuma” [-12.86667, 15.06667] (Loveridge 1936a:45; Manaças 1981:35). **Benguela**: “Quissange” [-12.43333, 14.05000] (Bocage 1887c:211); “Benguella” [-12.58333, 13.41667] (Bocage 1866a:53); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:75; Manaças 1981:35); “Cubal” [-13.03333, 14.25000] (Mertens 1937:16, 1938:442; Manaças 1981:35); “Equimina” [-13.20000, 14.78333] (Bocage 1895a:149; Manaças 1981:35); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:113; Manaças 1981:35). **Huíla**: “Capelongo” [-14.91667, 15.08333] (Bogert 1940:99; Manaças 1981:35); “Sangevé” [-13.88333, 15.83333] (Monard 1937b:141-142; Manaças 1981:35); “Rio Calae” [-13.96667, 16.03333] (Bocage 1879c:89, 1895a:149; Monard 1937b:141; Manaças 1981:35); “Kuvangu (Vila-da-Ponte)” [-14.46667, 16.30000] (Monard 1937b:141, 142; Manaças 1981:35); “Kampulu” [-15.21667, 16.11667] (Monard 1937b:141-142; Manaças 1981:35); “Rio Cabindongo” (Bocage 1895a:149; Monard 1937b:141; Manaças 1981:35). **Namibe**: “Mossamedes” [-15.20000, 12.15000] (Günther 1865a:480; Manaças 1981:35). **Cunene**: “ruisseau Mbalé (Bale)” [-15.16667, 16.75000] (Monard 1937b:141-142; Manaças 1981:35). **Cuando Cubango**: “approximately 33 km ESE of Cuito Cuanavale” [-15.28333, 19.50000] (Branch and McCartney 1992:2); “Cuito basin (61)” [-16.98919, 19.40614] “Cuando basin (38)” (not collected) [-17.58830, 22.65694] (Conradie et al. 2016:8, 10, 23). **Undetermined Locality**: “from almost all localities that he [J. Anchieta] visited” (Bocage 1895a:149).

Taxonomic and distributional notes: Merrem (1820) had indications to numerous earlier works, including Seba (1735) and Gronovius (1756). In addition, his scale counts (ventrals + caudals), though similar to those given by Gronovius are not exactly the same, suggesting that he made scale counts on at least one specimen himself. Merrem had access to some of Seba’s original specimens through the collections of Willem Xaver Janssen (1760–1793) and Friedrich Heinrich Graf von Borcke (1776–1825), successive owners of Seba specimens originally sold at auction (Anonymous 1752) (Bauer and Günther 2013). Surviving *B. arietans* from this collection (ZMB 2879) does not correspond to the Seba image indicated by Merrem, although it may have been examined by him and could have been part of the basis for his description. Wallach et al. (2014) appear to be the first to have explicitly designated a lectotype for the puffadder.

The species has significant phylogeographic structure (Lenk et al. 1999; Barlow et al. 2013; Bates et al. 2014) and the implications for its systematics status are being investigated. Currently, two subspecies are recognized: *Bitis arietans arietans* (Merrem, 1820) widespread in sub-Saharan Africa and *Bitis arietans somalica* Parker, 1949 restricted to Somalia (Branch 1998; Bates et al. 2014). Some authors (e.g., Spawls and Branch 1995; Vogel and Dobiey 2007) considered *B. arietans* widespread in Angola although with no occurrences in northwest regions of the country, whereas Wallach et al. (2014) only cited localities in the eastern regions of Lunda Norte and Moxico Provinces. See McDiarmid et al. (1999) for a chresonymy of the species.

***Bitis caudalis* (Smith, 1839)**

HORNED ADDER

Vipera ocellata Smith 1838:92. Syntypes: BMNH 1865.5.4.153a-e (collector A. Smith). Type locality: “sandy districts north of the Cape Colony,” South Africa. Junior primary homonym of *Vipera ocellata* Latreille, 1801 [= *Vipera aspis* Linnaeus, 1758].

Vipera (*Cerastes*) *caudalis* Smith 1839: pl. 7, first of two accompanying unnumbered text pages. Syntypes: BMNH 1865.5.4.153a-e (collector A. Smith). Type locality: “sandy districts north of the Cape Colony,” South Africa (verbatim from Smith 1838). Nomen substitutum for *Vipera ocellata* Smith, 1838.

Cerastes caudalis: Bocage (1867c:227, 1870:68).

Vipera caudalis: Günther (1865a:480), Bocage (1895a:150).

Bitis caudalis: Boulenger (1915:221), Frade (1963:253), Haacke (1984:174), Manaças (1981:37), Visser

(1981:7), Spawls and Branch (1995:105), Branch (1998:116), Dobiey and Vogel (2007:110), Bates et al. (2014:334), Wallach et al. (2014:90).

Bitis caudalis caudalis: Laurent (1964a:128).

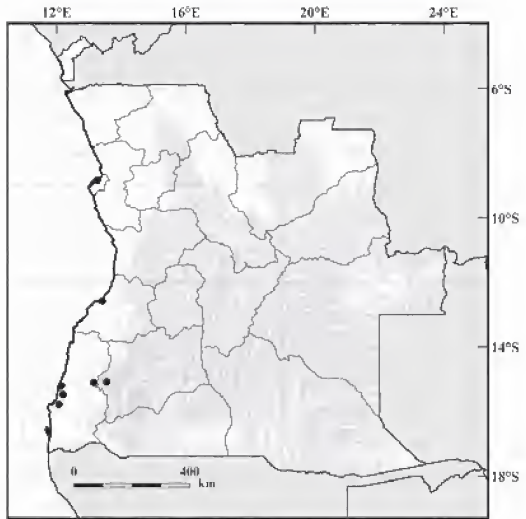
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from the arid western region of southern Africa, throughout Karoo and Kalahari, from southern Zimbabwe and the western half of South Africa to southern Angola – the northern limit for the species.

Ocurrences in Angola (Map 270): The species occurs in the southwestern Angola, with preference of hot and dry open areas in sandy regions. **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1895a:150; Manaças 1981:37). **Benguela:** “Benguela” [-12.58333, 13.41667] (Manaças 1981:37). **Huíla:** “Huila” [-15.08333, 13.55000] (Manaças 1981:37). **Namibe:** “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:150; Monard 1937b:141; Manaças 1981:37); “Mossamedes” [-15.20000, 12.15000] (Günther 1865a:480; Bocage (1867c:227; Manaças 1981:37); “Désert de Moçâmedes, à 35 km au sud de la ville” [-15.20000, 12.15000] (Laurent 1964a:128); “Rio Coroca” [-15.78333, 12.06667] (Bocage 1895a:150; Monard 1937b:141; Manaças 1981:37). **Undetermined**

Locality: “with no precise location” (Bocage 1870:68).

Taxonomic and distributional notes: Although Smith’s (1838) *Vipera ocellata* was preoccupied, Smith (1839) noted only “As it does not appear probable that the genus *Vipera* will ultimately be divisible into subgenera, I have thought it advisable to substitute for *ocellata*. — a term which under such circumstances would cause some confusion, — that of *caudalis*.” Preliminary phylogeographic analysis indicates appreciable regional divergence (A. Barlow et al. unpublished data in Bates et al. 2014). Visser (1981) provided a map with the Transvaal Museum accessions since 1962 for *Bitis caudalis*. Haacke (1984) subsequently provided a map with some records for the species in Namibe Province, without explicit locality information, however the two maps are very similar and probably represent the same data, showing the southwestern distribution of the species in the country. The Angolan record from “Loanda/Luanda” (Bocage 1895a; Manaças 1981) is doubtful and certainly represents a misidentification.



MAP 270. Distribution of *Bitis caudalis* in Angola.

Bitis gabonica Duméril, Duméril and Bibron, 1854

GABON ADDER

Echidna Gabonica Duméril, Duméril and Bibron 1854:1428, pl. 80 bis, figs. 1–3. Lectotype: MNHH 4012 (collector C.-E. Aubry-Lecomte), designated by Hughes and Barry (1969:1030). Type locality: “côte du Gabon” (Duméril, Duméril and Bibron 1854:1428), Gabon.

Echidna rhinoceros: Bocage (1866a:53).

Vipera (Bitis) rhinoceros: Peters (1877a:618).

Bitis rhinoceros: Bocage (1887a:191).

Vipera rhinoceros: Bocage (1895a:149, 1896a:113, 1897b:211).

Bitis gabonica: Boulenger (1915:222), Laurent (1950a:11), Spawls and Branch (1995:116–117), Lenk et al.

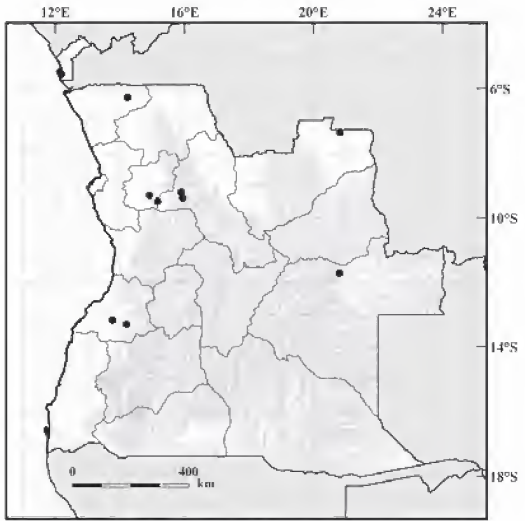
(1999:31), Lenk et al. (2001:94), Chippaux (2006:260), Chirio and LeBreton (2007:602), Dobiey and Vogel (2007:111), Wallach et al. (2014:90), Oliveira et al. (2016:42).

Bitis gabonica gabonica: Laurent (1954a:62, 1964a:128), Loveridge (1957:302), Thys van den Audenaerde (1966:36), Manaças (1981:36).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from forest-savanna mosaic of West and Central Africa from Benin to Angola and is very widespread in the Democratic Republic of Congo, extending marginally into adjacent areas such as southern Nigeria and northern Zambia, with isolated populations in South Sudan, Kenya, and eastern southern Africa, the southern most occurring in northeastern KwaZulu-Natal.

Ocurrences in Angola (Map 271): The species occurs in northern regions of Angola including Cabinda enclave and the northeastern areas of Moxico Province. **Cabinda:** “Chinchoxo” [-5.48333, 12.13333] (Peters 1877a:618; Bocage 1895a:149; Manaças 1981:36); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:53, 1887a:191, 1895a:149; Manaças 1981:36). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:191, 1895a:149; Manaças 1981:36). **Malanje:** “Cacuso” [-9.4994, 15.1613] (Oliveira et al. 2016:42); “Kalandula” [-9.1956, 15.9026] [-9.2097, 15.8906] [-9.1907, 15.9159] [-9.3872, 15.9441] (Oliveira et al. 2016:42). **Kwanza Norte:** “N’dala Tando” [-9.30000, 14.91667] (Manaças 1981:36). **Benguela:** “Hanha” [-13.30000, 14.20000] (Bocage 1896a:113, 1897b:211; Manaças 1981:36); “Caimbambo” [-13.1677, 13.7663] (Oliveira et al. 2016:42). **Moxico:** “environs du lac Calundo (Lago Calundo)” [-11.71667, 20.80000] (Laurent 1964a:128; Manaças 1981:36). **Lunda Norte:** “Dundo” [-7.3667, 20.8267] (Oliveira et al. 2016:42).



MAP 271. Distribution of *Bitis gabonica* in Angola.

Taxonomic and distributional notes: McDiarmid et al. (1999) incorrectly cited MNHN 4020 as a holotype specimen. The description was based on a skin sent by Aubry-Lecomte and a specimen from the Ménagerie du Muséum. Angolan specimens of *Bitis gabonica* have occasionally been cited as *Bitis rhinoceros* (Schlegel, 1855) — a closely related species endemic to West Africa (Lenk et al. 1999; Lenk et al. 2001; Chipaux 2006; Bates et al. 2014; Wallach et al. 2014).

Bitis heraldica (Bocage, 1889)

ANGOLAN ADDER (Endemic)

Vipera heraldica Bocage 1889:127. Holotype: MBL 2127 (collectors H.C. Capello and R. Ivens), destroyed by fire 18 March 1978. Type locality: “sur les bords de la rivière Calae, l’un des affluents du Cunene” [= Calai River banks] Huila Province, Angola.

Vipera heraldica: Bocage (1895a:151).

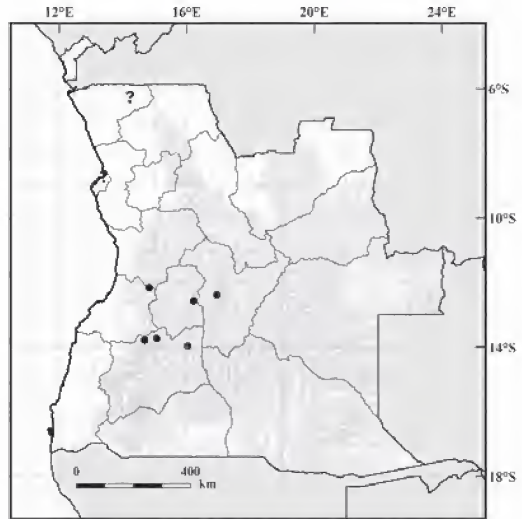
Bitis peringueyi: Boulenger (1896:495, 1905:114, 1915:221), Monard (1937b:143), Bogert (1940:101).

Bitis heraldica: Ferreira (1897b:245), Hellmich (1957b:75), Mertens (1958:146), Manaças (1981:38), Spawls and Branch (1995:104), Dobiey and Vogel (2007:113), Wallach et al. (2014:91).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from western Angola, chiefly in association with the high plateau.

Occurrences in Angola (Map 272): The species is known from the central highlands in Angola. **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Manaças 1981:38). **Bengo:** “Bengu” [-8.71667, 13.40000] (Monard 1937b:141; Mertens 1958:147; Manaças 1981:38; Spawls and Branch 1995:105; Wallach et al. 2014:91). **Kwanza Sul:** “Mombolo” [-12.16667, 14.83333] (Bogert 1940:101; Mertens 1958:146; Manaças 1981:37-38). **Huambo:** “Bela Vista (Sanguengue)” [-12.56667, 16.21667] (Hellmich 1957b:75; Mertens 1958:146; Manaças 1981:38; Spawls and Branch 1995:105). **Bié:** “Bié” [-12.38333, 16.95000] (Mertens 1958:147; Manaças 1981:38; Spawls and Branch 1995:105). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:151;



MAP 272. Distribution of *Bitis heraldica* in Angola.

Ferreira 1897b:245; Monard 1937b:141; Mertens 1958:147; Manaças 1981:38; Spawls and Branch 1995:105); “Kalukembé (Caluquembe)” [-13.78333, 14.68333] (Monard 1937b:141, 143; Mertens 1958:147; Manaças 1981:38; Spawls and Branch 1995:105); “sur les bords de la rivière Calae, l’un des affluents du Cunene (Rio Calae)” [-13.96667, 16.03333] (Bocage 1889:127, 1895a:151; Monard 1937b:141; Mertens 1958:147; Manaças 1981:38; Spawls and Branch 1995:105). **Undetermined Locality:** “Between Benguella and Bihé” (Boulenger 1905:114; Monard 1937b:141).

Taxonomic and distributional notes: This species was described by Bocage (1889) based on one specimen from “sur les bords de la rivière Calae, l’un des affluents du Cunene”. This species was later considered by Boulenger (1896) a synonym of *Bitis peringueyi* (Boulenger, 1888) although Ferreira (1897) doubted this conclusion. Later, Mertens (1958) reestablished *B. heraldica* based on distinctive morphological characters between the two species and referred Angolan material from “Kalukembé” (Monard, 1937b) and from “Namba, Mombolo” (Bogert, 1940) to *B. heraldica*.

Bitis nasicornis (Shaw, 1792)

RHINOCEROS VIPER

Coluber Nasicornis: Shaw in Shaw and Nodder 1792: pl. 94, first of three accompanying unnumbered pages of Latin description). Holotype: BMNH, lost *fide* Golay et al. (1993) (donated by E. Jenkins). Type locality: “interiori Africa” [“likely to be from Ghana” *fide* Hughes and Barry 1969:1030].

Bitis nasicornis: Boulenger (1915:222), Parker (1936:126), Hellmich (1957b:76), Loveridge (1957:302), Manaças (1981:36), Spawls and Branch (1995:118), Lenk et al. (1999:31), Lenk et al. (2001:96), Chirio and LeBreton (2007:604), Dobiey and Vogel (2007:117), Wallach et al. (2014:91).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is restricted to the rainforest of West Africa, known from Guinea to Gabon, extending east to Uganda, western Kenya, and northern Tanzania, having its southern limit in the northern regions of Angola and Zambia. Wallach et al. (2014) considered records from Spawls et al. (2004) from northeastern Tanzania to be unconfirmed.

Occurrences in Angola (Map 273): The species is limited to the northwestern of the country,

including the Cabinda enclave, although there are no published records from the latter area. **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:76). **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:126, Manaças 1981:36).

Taxonomic and distributional notes:

This species is often attributed to Shaw (1802), where the species description is largely repeated, or to Shaw and Nodder (1792) (e.g., Wallach et al. 2014). As noted by McDiarmid et al. (1999), evidence suggests that Shaw alone is responsible for the description. Shaw (1792) specifically stated that the specimen had been presented to the British Museum from Edward Jenkins, who had obtained it from “the master of a Guinea vessel. Hoser (2013) erected a new taxon, *B. hoserae*, for *B. nasicornis* east of the Dahomey Gap, but did not mention Angola or Angolan populations explicitly.



MAP 273. Distribution of *Bitis nasicornis* in Angola.

***Bitis peringueyi* (Boulenger, 1888)**

PERINGUEY'S ADDER

Vipera peringueyi Boulenger 1888:141. Holotype: SAM 1852 (collector L.A. Péringuey), lost *vide* Stander in Golay et al. (1993). Type locality: “Damaraland, 10 miles east of Walfisch Bay” [= 10 miles east of Walvis Bay], Erongo Region, Namibia.

Bitis peringueyi: Manaças (1981:37), Spawls and Branch (1995:108), Branch (1998:119), Dobiey and Vogel (2007:118), Wallach et al. (2014:92).

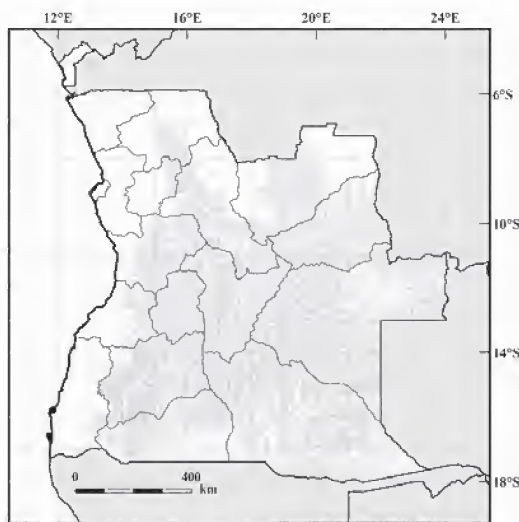
Global conservation status (IUCN): Least Concern.

Global distribution: The species occurs limited to sandy regions of the Namib Desert, in two disjunct populations corresponding to the northern and southern sand seas of the Namib. In Namibia from Lüderitz north to Roikop, and then from northern Namibia northward to Namibe Province, southern Angola.

Occurrences in Angola (Map 274): The species is limited to the Namib Desert in Namibe Province. **Namibe:** “Porto Alexandre” [-15.80000, 11.83333] (Spawls and Branch 1995).

Taxonomic and distributional notes:

Boulenger (1896) considered *Bitis heraldica* (Bocage, 1889) to be a synonym of *B. peringueyi* which resulted in an incorrect distribution range for the species in Angola (see *Bitis heraldica* account). The species was cited for southern Angola by several authors (Manaças 1981, Branch 1998, Dobiey and Vogel 2007, Wallach et al. 2014), although the locality “Porto Alexandre”, currently known as



MAP 274. Distribution of *Bitis peringueyi* in Angola.

“Tômbua,” is the first explicit published record for the species in the country (Spawls and Branch 1995). Wallach et al. (2014) erroneously considered *B. peringueyi* present in Kwanza Sul Province, presumably based on Bogert’s (1940) record of *B. heraldica* (as “*B. peringueyi*”).

Genus *Causus* Wagler, 1830

Causus bilineatus Boulenger, 1905

TWO-STRIPED NIGHT ADDER

Causus rhombeatus var. *bilineatus* Boulenger 1905:114. Syntypes: BMNH 1905.5.29.36–40 (collector W.J. Ansorge). Type locality: “Duque de Bragança, Quissange, Caconda et Huíla” (Bocage 1895a:146) [= Calandula, Quissange, Caconda and Huíla] Angola, and “Between Benguela and Bihé” (Boulenger 1905:114), Angola.

Causus rhombeatus: Bocage (1895a:147); Boulenger (1896:468); Schmidt (1933:15), Hellmich (1957b:74), Loveridge (1957:299).

Causus bilineatus bilineatus: Laurent (1964a:125).

Causus bilineatus: Spawls et al. (2004:469), Broadley (1968b:407), Spawls and Branch (1995:140), Broadley and Cotterill (2004:46), Rasmussen (2005:1), Manaças (1981:33), Dobiey and Vogel (2007:125), Wallach et al. (2014:148).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from the plateau of South-Central Africa, in Angola, southern Democratic Republic of Congo and north-west Zambia, reaching Tanzania.

Ocurrences in Angola (Map 275): The species occurs from west to eastern Angola.

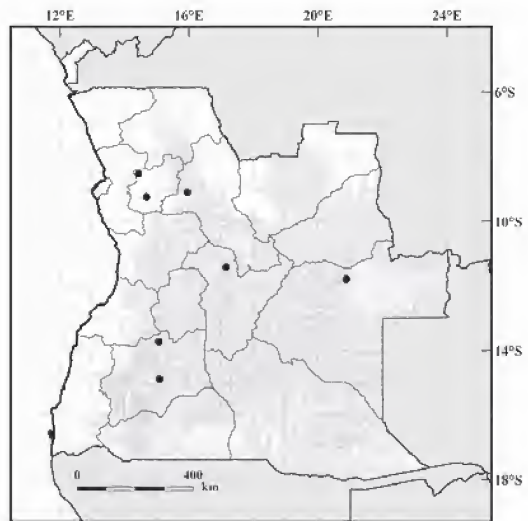
Kwanza Norte: “Piri-Dembos” [-8.53333, 14.43333] (Hellmich 1957b:74; Manaças 1981:33; Rasmussen 2005:14); “Canhoca” [-9.25000, 14.68333] (Boulenger 1905:114; Manaças 1981:33). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:51, 1895a:145; Monard 1937b:141; Manaças 1981:33; Rasmussen 2005:14).

Moxico: “Rives du lac Calundo (Lago Calundo)” [-11.80000, 20.86667] (Laurent 1964a:125; Manaças 1981:33; Rasmussen 2005:14). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:15; Rasmussen 2005:14).

Huíla: “Caconda” [-13.73333, 15.06667] (Bocage 1895a:145; Monard 1937b:141; Manaças 1981:33; Rasmussen 2005:14);

“Capelongo” [-14.88333, 15.08333] (Manaças 1981:33); “Huíla” [-15.08333, 13.55000] (Bocage 1895a:145; Boulenger 1896:468; Monard 1937b:141; Manaças 1981:33; Rasmussen 2005:14).

Taxonomic and distributional notes: Bocage (1895a) in his remarks on *Causus rhombeatus* (Lichtenstein, 1823) recognized a striped form based on several individuals from Angola deposited in the Museu Bocage collection from “Duque de Bragança, Quissange, Caconda et Huíla,” although he did not recognize them as taxonomically distinct. Boulenger (1905) subsequently noted the same striped form described by Bocage based on specimens from “between Benguela and Bihé” and proposed the name *C. rhombeatus* var. *bilineatus*. McDiarmid et al. (1999) included Bocage’s (1895a) specimens among the type series, but Boulenger (1905) clearly referred only to the striped specimens collected by Ansorge and in the BMNH collection. For some time, the



MAP 275 Distribution of *Causus bilineatus* in Angola.

nomen *bilineatus* was neglected (e.g., Schmidt 1933; Monard, 1937b; Bogert, 1940; Hellmich 1957a,b) and the corresponding Angolan records were associated with *C. rhombeatus*. Laurent (1964a) revived the name *bilineatus*, and included his recently described *Causus lineatus* (Laurent, 1956), which he considered a dwarf subspecies of *Causus bilineatus*. However, his specimens differ little from those of the type series from “Benguela to Bihe” (Broadley and Cotterill 2004). Loveridge (1957) included both *bilineatus* and *lineatus* in the synonymy of *C. rhombeatus*, but Broadley (1968b) placed *C. b. lineatus* in the synonymy of *C. bilineatus* without comment, where it has since remained (Rasmussen 2005). Laurent (1964a) erroneously assigned some Angolan records of *C. rhombeatus* to *C. bilineatus* (e.g., “Pungo-Andongo” [Boulenger 1905]; “Mombolo” [Bogert 1940]; “Bela Vista”, “Entre Rios” [Hellmich 1957b]) as did Manaças (1981). Most of the specimens cited by Laurent (1964a) were examined and revised by Rasmussen (2005).

Causus lichtensteinii (Jan, 1859)

FOREST NIGHT ADDER

A[spidelaps] (*Sepedon*) *Lichtensteinii* Jan 1859:511. Holotype: NMBA, lost (*fide* Kramer 1978; Golay et al. 1993), destroyed in 1943 during the World War II *fide* Wallach et al. (2014). Type locality: “Côte-d’Or” [= Ghana].

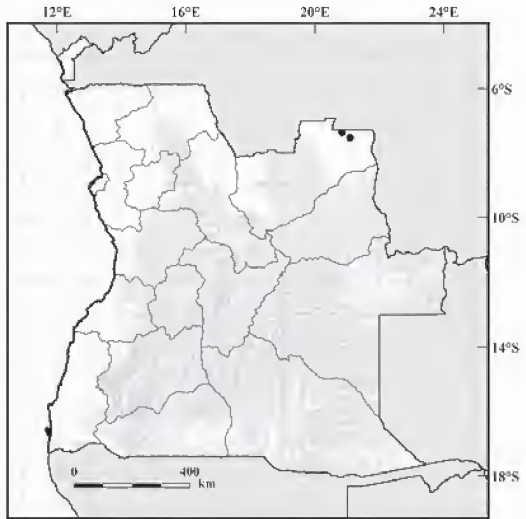
Causus lichtensteinii: Laurent (1950a:11, 1964a:127), Manaças (1981:34), Spawls and Branch (1995:143), Spawls et al. (2004:471), Rasmussen (2005:11), Chirio and LeBreton (2007:606), Dobiey and Vogel (2007:126), Akani et al. (2012:192), Wallach et al. (2014:149).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from the central African forests from Guinea and Liberia eastward through Ghana to Nigeria, Cameroon, the Central African Republic, south to Democratic Republic of Congo, northeastern Angola, and northwestern Zambia, and east to Uganda and western Kenya.

Occurrences in Angola (Map 276): The species occurs in the northern Angola, in the adjacent areas near the border with Democratic Republic of Congo and in the Cabinda enclave, although there are no published records from Cabinda. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:127, Manaças 1981:34); “rivière Lukashi, affluent de la rive gauche de la Tshihumbwe (Rio Lukashi)” [-7.53333, 21.08333] (Laurent 1950a:11; Manaças 1981:34).

Taxonomic and distributional notes: Wallach et al. (2014) recorded this species as present in Benguela Province, although this almost certainly is based on a misidentification.



MAP 276. Distribution of *Causus lichtensteinii* in Angola.

Causus maculatus (Hallowell, 1842)

SPOTTED NIGHT ADDER

Distichurus Maculatus Hallowell 1842:337, pl. 19. Holotype: ANSP 6897 (collector S.M.E. Goheen). Type locality: “Liberia, Westen Africa”.

Causus rhombeatus: Bocage (1895a:145), Parker (1936:126), Laurent (1950a:11, 1954a:61), Hellmich (1957b:74).

Causus maculatus: Laurent (1964a:124), Thys van den Audenaerde (1966:36), Manaças (1981:32), Spawls

and Branch (1995:145), Rasmussen (2005:14), Chippaux (2006:241), Trapé and Mané (2006:206), Dobiey and Vogel (2007:127), Chirio and LeBreton (2007:608), Wallach et al. (2014:148).

Global conservation status (IUCN): Not Evaluated.

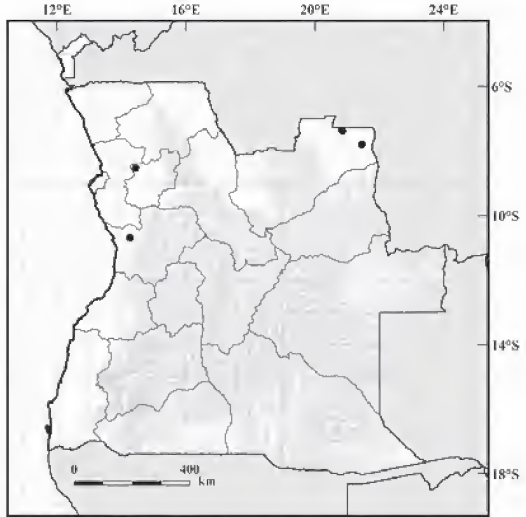
Global distribution: The species is known from West-Central Africa from Mauritania to Ethiopia, and south to Angola.

Occurrences in Angola (Map 277): The species occurs in the northern Angola.

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1950a:11, 1954a:61, 1964a:124, Thys van den Audenaerde 1966:36, Manaças 1891:32; Rasmussen 2005:14); “Barrage de la Luachimo” [-7.38333, 20.85000] (Thys van den Audenaerde 1966:36); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:11, 1954a:61); “Sombo” [-8.68333, 20.95000] (Laurent 1954a:61). **Kwanza Norte:** “Piri-Dembos” [-8.53333, 14.43333] (Hellmich 1957b:74; Rasmussen 2005:14). **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:126).

Taxonomic and distributional notes:

Bogert (1940) pointed out a possible taxonomic difference between the savanna *C. rhombeatus* (typical form) and the forest dwellers, which was later confirmed by Laurent (1956, 1964a). Laurent (1960) identified *C. maculatus* as a forest form, distinguishing it from *C. rhombeatus*, which is sympatric in Angola (Manaças, 1981). Laurent (1964a) assigned the Angolan records previously referred to *C. rhombeatus* (e.g., “Dundo,” “Muita,” “Sombo” [Laurent 1950a, 1954a], “Quirimbo” [Parker 1936]) to *C. maculatus*, and referred the specimens cited in Bocage (1895a) from Congo and a part of northern Angolan to *C. maculatus*, Without further comment. According to Rasmussen (2005) two specimens from the Zoological Museum of the University of Hamburg previously identified as *Causus rhombeatus* (Lichtenstein, 1823) from “Piri-Dembos” (Hellmich, 1957b) correspond, in fact, to *Causus maculatus*.



MAP 277. Distribution of *Causus maculatus* in Angola.

***Causus resimus* (Peters, 1862)**

GREEN NIGHT ADDER

Heterophis resimus Peters 1862b:277, pl., figs. 4, 4a, 4b. Holotype: ZMB 4370 (collector A. von Barnin and R. Hartman). Type locality: “Sennâr, vom Gebel-Ghule” [= Jebel Ghule, Sennar Province], Sudan.

Heterophis resimus = *Causus rostratus*: Bocage (1870:68).

Causus resimus: Bocage (1887c:211), Ferreira (1904:116), Boulenger (1896:469, 1915:220), Loveridge (1936a:44, 1957:299), Parker (1936:127), Monard (1937b:141), Bogert (1940:97), Manaças (1981:33), Spawls and Branch (1995:142), Spawls et al. (2004:474). Rasmussen (2005:14), Chirio and LeBreton (2007:610), Dobiey and Vogel (2007:128), Akani et al. (2012:189), Wallach et al. (2014:149).

Causus resimus var. *angolensis* Bocage (1895a:148). Syntypes: MBL 2025, 2080 (Biballa), MBL 2084a–b (Quissange), MBL 2079 (Novo Redondo), MBL 2082a–b (Rio Chimba), 2083a–b (Dondo) (*vide* McDiarmid et al. 1999) and presumably others, (collectors Banyures [Rio Dande, Rio Bengo], F.A.P. Bayão [Dondo], A. da Fonseca [Cazengo], F. Newton [Novo Redondo], J.A. d’Anchieta [Quissange, Rio Chimba, Biballa, Maconjo]), destroyed by fire 18 March 1978. Type locality: “Rio Dande et Rio Bengo ... Dondo ... Cazengo ... Novo Redondo ... Quissange, Rio Chimba, Biballa et Maconjo.”

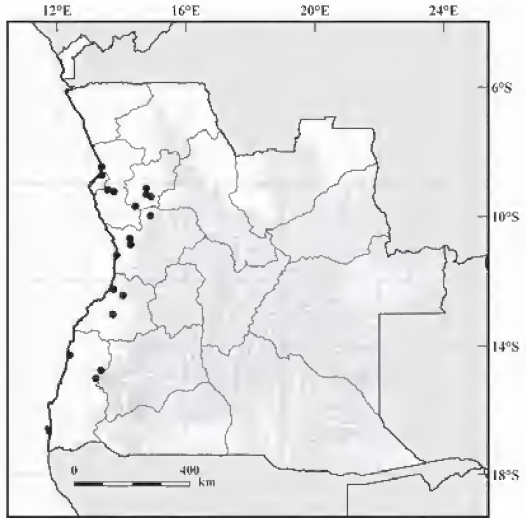
Causus rhombeatus: Hellmich (1957b:74).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species has a strange and seemingly disjunct distribution in Africa, with isolated populations in northern Zaire, eastern Cameroon and the Cameroon-Chad border, Angola, presumably Nigeria, coastal Kenya, Somalia, central and south-western Sudan, and south-eastern Ethiopia to Mozambique (see Hughes 1987; Spawls and Branch 1995).

Occurrences in Angola (Map 278): The species occurs in western Angola, in dry and moist savannas and woodlands of coastal regions. **Bengo:** “Rio Bengo” [-8.71667, 13.40000] (Bocage 1895a:146; Monard 1937b:141; Manaças 1981:33); “Cabicula” [-9.16667, 13.56667] (Ferreira 1904:116; Monard 1937b:141; Manaças 1981:33); “Cunga” [-9.23333, 13.76667] (Manaças 1981:33). **Luanda:** “Rio Dande” [-8.46667, 13.38333] (Bocage 1895a:146; Monard 1937b:141; Loveridge 1957:299; Manaças 1981:33); **Kwanza Norte:** “Golungo Alto” [-9.13333, 14.76667] (Boulenger 1896:469; Manaças 1891:33); “Cazengo” [-9.33333, 14.76667] (Bocage 1895a:146; Ferreira 1904:116; Monard 1937b:141; Manaças 1981:33); “Caculo” [-9.38333, 14.91667] (Ferreira 1904:116); “Dondo” [-9.68333, 14.43333] (Bocage 1895a:146; Monard 1937b:141; Manaças 1981:33). **Kwanza Sul:** “Libolo-Luati” [-9.98333, 14.90000] (Hellmich 1957b:74; Manaças 1981:33); “Novo Redondo” [-11.20000, 13.85000] (Bocage 1895a:146; Monard 1937b:141; Manaças 1981:33); “Quirimbo” [-10.68333, 14.26667] (Parker 1936:127; Manaças 1981:33); “Congulu” [-10.86667, 14.28333] (Parker 1936:127; Manaças 1981:33). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1887c:211, Bocage 1895a:146; Monard 1937b:141; Manaças 1981:33); “Catengue” [-13.03333, 13.73333] (Rasmussen 2005:14); “Hanha” [-12.25000, 13.75000] (Bogert 1940:97; Manaças 1981:33; Rasmussen 2005:14). **Namibe:** “Rio Chimba” [-14.30000, 12.40000] (Bocage 1895a:146; Monard 1937b:141; Manaças 1981:33); “Biballa” [-14.76667, 13.36667-84] (Bocage 1895a:146; Monard 1937b:141; Manaças 1981:33); “Maconjo (Macujo)” [-15.01667, 13.20000] (Bocage 1895a:146; Monard 1937b:141; Manaças 1981:33). **Undetermined Locality:** “Without precise location” (Bocage 1870:68).

Taxonomic and distributional notes: No subspecies are currently recognized (Wallach et al. 2014).



MAP 278. Distribution of *Causus resimus* in Angola.

Causus rhombeatus (Lichtenstein, 1823)

RHOMBIC NIGHT ADDER

Sepedon rhombeata Lichtenstein 1823:106. Syntypes: ZMB 2768-69 (collector G.L.E. Krebs) and possibly ZMB 2770 (donor [?] M.H.C. Lichtenstein, possibly G.L.E. Krebs). Type locality: “Prom. B. sp.” [= Promontorium Bonae Spei = Cape of Good Hope], South Africa. Restricted to “area contained within the magisterial districts of Uitenhage, Kirkwood and Port Elizabeth, Eastern Cape Province, South Africa” by Bauer (2000:55, 57).

Causus rhombeatus: Günther (1865a:480), Bocage (1866a:51, 1879b:95, 1887a:189, 1887b:207, 1895a:145, 1896a:113, 1897b:211), Peters (1877a:618, 1881:150), Ferreira (1897b:245, 1900a:53, 1906:169), Boulenger (1896:468, 1905:114, 1915:220), Schmidt (1933:15), Parker (1936:126), Loveridge (1936:44),

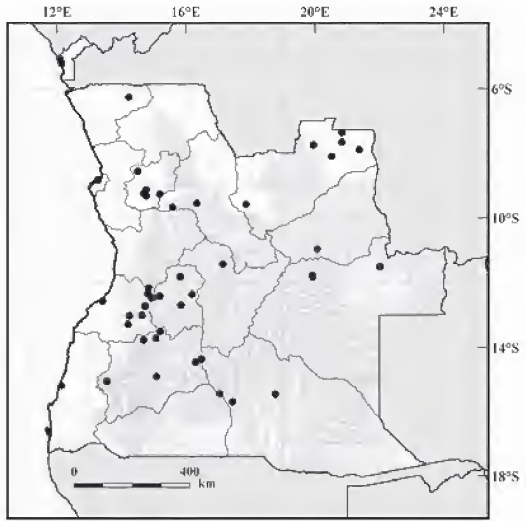
Monard (1937b:141-142), Mertens (1938a:442), Bogert (1940:96), Themido (1941:11), Laurent (1964a:123), Hellmich (1957a:75, 1957b:74), Thys van den Audenaerde (1966:36), Manaças (1973:197, 1981:32), Spawls and Branch (1995:147), Rasmussen (2005:14), Dobiey and Vogel (2007:129), Hampton (2010:235), Broadley (2014:350), Wallach et al. (2014:150), Branch and Conradie (2015:200).

Causus cf. rasmusseni: Conradie et al. (2016:23).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species has an extensive range in moist savannas of south, central and east Africa, from eastern Nigeria, southern Sudan and Ethiopia southwards to the Swellendam area in the Western Cape, South Africa, but is absent from much of the arid western half and much of the central part, of southern Africa.

Ocurrences in Angola (Map 279): The species occurs in the entire country with exception of the southern regions and probably Cabinda (see below). **Cabinda:** ? “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:618; Bocage 1895a:145); ? “Landana” [-5.21667, 12.15000] (Bocage 1895a:145). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:189, 1895a:145). **Luanda:** “Loanda” [-8.83333, 13.26667] (Ferreira 1900a:53). **Bengo:** “Cacolo até ao Rio Bengo” (Ferreira 1900:53). **Malanje:** “Malanje” [-9.55000, 16.35000] (Peters 1881:150; Bocage 1895a:145; Monard 1937b:141); “Pungo-Andongo” [-9.66667, 15.58333] (Günther 1865a:480; Boulenger 1905:114; Manaças 1981:33; Rasmussen 2005:14). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent



MAP 279. Distribution of *Causus rhombeatus* in Angola.

1964a:123; Manaças 1981:32; Thys van den Audenaerde 1966:36; Broadley 2014:350); “Carumbo” [-7.74422, 19.95467] (Branch and Conradie 2015:200); “Cossa” [-7.90000, 21.36667] (Laurent 1964a:123; Manaças 1981:32; Broadley 2014:350); “Rivière Chicapa, près du pont, 50 km à l’Ouest de Dundo” [-8.10000, 20.51667] (Thys van den Audenaerde 1966:36); “R. Chimenji, affl. de la Chiumbe” [-7.66667, 20.83333] (Thys van den Audenaerde 1966:36); “Cassange” [-9.58333, 17.86667] (Bocage 1895a:145; Monard 1937b:141). **Lunda Sul:** “Tyihumbwé” [-10.96667, 20.06667] (Monard 1937b:142). **Moxico:** “Lago Dilolo” [-11.50000, 22.01667] (Manaças 1973:197); “environs du lac Calundo” [-11.71667, 20.80000] (Laurent 1964a:123; Manaças 1981:32; Broadley 2014:350); “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1973:197); “Fazenda Santa Cruz, Luso” [-11.78333, 19.91667] (Manaças 1973:197). **Kwanza Norte:** “Cazenogo” [-9.33333, 14.76667] (Ferreira 1900a:53); “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:74; Rasmussen 2005:14); “Golungo Alto” [-9.13333, 14.76667] (Boulenger 1896:468; Ferreira 1906:169; Monard 1937b:141; Rasmussen 2005:14); “Canhoca” [-9.25000, 14.68333] (Boulenger 1905:114; Rasmussen 2005:14); “Território de Ambaca” [-9.26667, 15.18333] (Ferreira 1900a:53). **Kwanza Sul:** “Mombolo” [-12.16667, 14.83333] (Bogert 1940:96; Manaças 1981:33; Rasmussen 2005:14). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:15; Rasmussen 2005:14). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:142); “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:74; Manaças 1981:33; Rasmussen 2005:14); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:126); “Santo-Amaro” [-12.70000, 15.85000] (Monard

1937b:141-142). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:145; Monard 1937b:141); “Benguela” [-12.58333, 13.41667] (Loveridge 1936a:44); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:145; Monard 1937b:141); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:141-142); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:75; Manaças 1981:33); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:442; Rasmussen 2005:14); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:113, 1897b:211); “Cabal” (Rasmussen 2005:14). **Huíla:** “Caconda” [-13.73333, 15.0666] (Bocage 1895a:145; Monard 1937b:141; Rasmussen 2005:14); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:141-142); “Kuvangu (Vila-da-Ponte)” [-14.46667, 16.30000] (Monard 1937b:141-142); “Capelongo” [-14.91667, 15.08333] (Bogert 1940:96; Rasmussen 2005:14); “Huilla” [-15.05000, 13.55000] (Hampton 2010:235). **Namibe:** “Rio Cuce” [-13.51667, 15.20000] (Ferreira 1897b:245; Monard 1937b:141); “Mossamedes” [-15.20000, 12.15000] (Bocage 1887a:189, 1895a:145). **Cuando Cubango:** “Kutatu” [-14.36667, 16.48333] (Monard 1937b:141-142); “Kakindo” [-15.45000, 17.05000] (Monard 1937b:141-142); “Kayundu” [-15.70000, 17.45000] (Monard 1937b:141-142); “riverine habitat Rio Longa (57)” [-15.45969, 18.76833] (Conradie et al. 2016:8, 12, 23). **Undetermined Locality:** “Between Benguella and Bihé” (Boulenger 1905:114; Rasmussen 2005:14).

Taxonomic and distributional notes: Hughes and Barry (1969) and McDiarmid et al. (1999) incorrectly stated that the types were lost, following information from G. Peters. Bogert (1940) pointed out a possible taxonomically relevant difference between the savanna *C. rhombeatus* (typical form) and its forest dwelling congeners, which was later confirmed by Laurent (1956, 1964a). Laurent (1964a) assigned the Angolan records previously referred to *C. rhombeatus* (e.g., “Dundo,” “Muita,” “Sombo” [Laurent 1950a, 1954a], “Quirimbo” [Parker 1936]) to *C. maculatus* and also considered specimens cited in Bocage (1895a) from Congo and a part of northern Angolan to be *maculatus*, without further comment. The species is widely distributed in Angola, however the Cabinda records, “Chinchoxo” and “Landana,” probably represent misidentifications (Spawls and Branch 1995; Rasmussen 2005; Dobiey and Vogel 2007). Conradie et al. (2016) cited a single specimen from “Rio Longa,” Cuando Cubango as *Causus* cf. *rasmusseni* Broadley, 2014, although its taxonomic status remains equivocal, since the topotypic material from *C. rasmusseni* is not available, and the “Rio Longa” specimen is only weakly differentiated from South African material.

Family Lamprophiidae Fitzinger, 1843

Genus *Amblyodipsas* Peters, 1857

Amblyodipsas polylepis (Bocage, 1873)

COMMON PURPLE-GLOSSED SNAKE

Calamelaps polylepis Bocage 1873b:216. Holotype: MBL 1878 (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Dondo, intérieur d’Angola” [= Dondo] Kwanza Norte Province, Angola.

Atractaspis Hildebrandtii: Peters (1877a:616).

Calamelaps polylepis: Bocage (1895a:126, 1897a:201), Ferreira (1904:116), Boulenger (1915:214).

Calamelaps unicolor: Loveridge (1933:260).

Calamelaps unicolor polylepis: Loveridge (1944c:164, 1957:281), de Witte and Laurent (1947:32).

Amblyodipsas polylepis polylepis: Broadley (1971c:649), Broadley (1990:202), Branch (1998:66).

Amblyodipsas polylepis: Broadley and Cotterill (2004:46), Bates et al. (2014:345), Wallach et al. (2014:25).

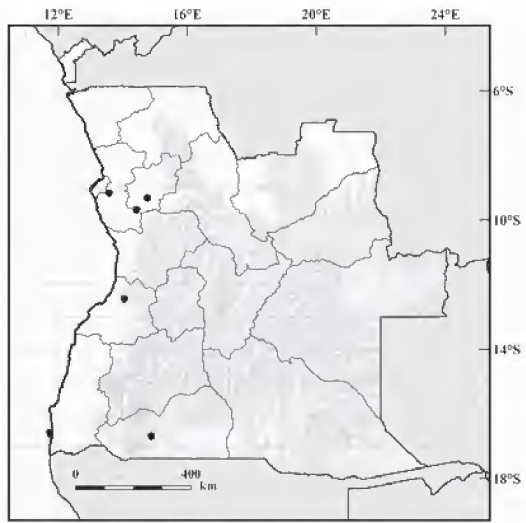
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from coastal Kenya to South Africa, west to Angola and northern Namibia.

Occurrences in Angola (Map 280): The species is known from western Angola, however, the species may occur country wide with exception of the northern regions. **Bengo:** “Cabicula”

[-9.16667, 13.56667] (Ferreira 1904:116; de Witte and Laurent 1947:32; Broadley 1971a:652). **Kwanza Norte:** “Cazengo” [-9.33333, 14.76667] (Bocage 1895a:126, 1897a:201; Loveridge 1944c:164; de Witte and Laurent 1947:32; Broadley 1971a:652); “Dondo” [-9.68333, 14.43333] (Bocage 1873b:216, 1895a:126, 1897a:201; Loveridge 1933:260, 1944c:164, 1957:281; de Witte and Laurent 1947:32; Broadley 1971a:652, 1990:202). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:126, 1897a:201; Loveridge 1944b:164; de Witte and Laurent 1947:32; Broadley 1971a:652). **Cunene:** “Humbe” [-16.68333, 14.90000] (Bocage 1895a:126, 1897a:201; Loveridge 1944bc:164; de Witte and Laurent 1947:32; Broadley 1971a:652). **Undetermined Locality:** “without precise locality” (Peters 1877a:616; Broadley 1971a:652).

Taxonomic and distributional notes: Wallach et al. (2014) confused “Dondo” with “Dundo” from Lunda Norte Province, eastern Angola. There are currently no outstanding taxonomic issues for *Amblyodipsas polylepis polylepis* (Bocage 1873), although the taxonomic status of the East African subspecies *Amblyodipsas polylepis hildebrandtii* (Peters, 1877) should be re-evaluated (Bates et al. 2014).



MAP 280. Distribution of *Amblyodipsas polylepis* in Angola.

Genus *Aparallactus* Smith, 1849

Aparallactus capensis Smith, 1849

CAPE CENTIPEDE EATER

Aparallactus capensis Smith 1849b:16. Holotype: BMNH 1946.1.8.62 (formerly 64.12.12.3) (collector A. Smith). Type locality: “the country (Kaffirland) to the eastward of the Cape Colony” [= KwaZulu-Natal], South Africa *vide* Broadley (1990).

Aparallactus Guentheri (part) Boulenger (1895c:172). Types: not identified. Type locality: “E. and C. Africa, Angola” corresponding to “Quindumbo” *vide* Bocage (1895a:127), Benguela Province, Angola.

Aparallactus Bocagii Boulenger (1895c:173). Types: not identified. Type locality: “Angola,” corresponding to “Novo Redondo” and “Gambos” *vide* Bocage (1895a:128), [= Sumbe and Chiange], Kwanza Sul and Huila provinces (respectively), Angola.

Aparallactus punctulolineatus Boulenger (1895c:173). Type(s): not identified. Type locality: “Angola,” corresponding to “Biballa” *vide* Bocage (1897a:201) [= Bibala], Angola.

Uriechis capensis: Bocage (1895a:128).

Aparallactus punctulolineatus: Boulenger (1895d:173, 1915:217).

Aparallactus guentheri: Boulenger (1895c:172, 1915:216), Monard (1937b:129), de Witte and Laurent (1947:115).

Aparallactus punctulolineatus: Boulenger (1895c:173, 1915:217).

Aparallactus bocagii: Boulenger (1896:259, 1915:216), Monard (1937b:129).

Aparallactus punctolineatus: Boulenger (1896:259).

Uriechis Bocagii: Bocage (1897a:201).

Uriechis punctatolineatus: Bocage (1897a:201).

Uriechis Guentherii: Bocage (1897a:201).

Aparallactus Bocagii: Boulenger (1905:114).

Aparallactus capensis bocagii: Loveridge (1944b:202), de Witte and Laurent (1947:126), FitzSimons (1962:270).

Aparallactus capensis capensis: Loveridge (1944c:205, 1957:287).

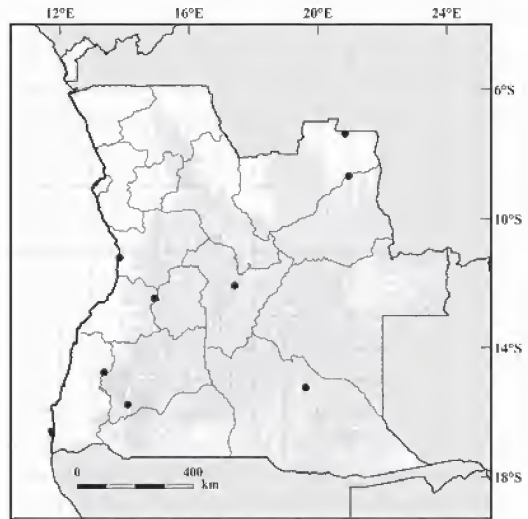
Aparallactus capensis punctatolineatus: de Witte and Laurent (1947:128), Laurent (1954a:45).

Aparallactus capensis: Broadley (1990:154), Spawls et al. (2004:420), Broadley and Cotterill (2004:47), Bates et al. (2014:347), Wallach et al. (2014:45).

Global conservation status (IUCN): Least Concern.

Global distribution: The distribution of this species extends from Tanzania in the north to the eastern Cape Province in the south, and westwards through south-eastern Democratic Republic of the Congo and Zambia to Angola.

Occurrences in Angola (Map 281): The species is apparently distributed from the central-west to southeastern regions, although also extends to the northeastern Lunda Norte Province. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:45); “Sombo” [-8.68333, 20.95000] (Laurent 1954a:45). **Kwanza Sul:** “Novo Redondo” [-11.20000, 13.85000] (Bocage 1895a:127-128, 1897a:201; Monard 1937b:129; Loveridge 1944b:205; de Witte and Laurent 1947:122; Broadley 1990:156). **Benguela:** “Bigondo” [-12.06667, 17.41667] (Monard 1937b:129; Loveridge 1944c:202); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:127, 1897a:201; Monard 1937b:129; Loveridge 1944c:205, 210; de Witte and Laurent 1947:115). **Huíla:** “Gambos” [-15.76667, 14.10000] (Bocage 1895a:127-128, 1897a:201; Monard 1937b:129; Loveridge 1944b:205; de Witte and Laurent 1947:126; Broadley 1990:156). **Quando Cubango:** “approximately 50 km E of Cuito Cunavale” [-15.23333, 19.61667] (Branch and McCartney 1992:2). **Namibe:** “Biballa” [-14.76667, 13.36667] (Bocage 1895a:127, 1897a:201; Monard 1937b:128; Loveridge 1944c:205; de Witte and Laurent 1947:128; Broadley 1990:156). **Undetermined Locality:** “Between Benguella and Bihé” (Boulenger 1915:217; Loveridge 1944c:205; de Witte and Laurent 1947b:122).



MAP 281. Distribution of *Aparallactus capensis* in Angola.

Taxonomic and distributional notes: In the BNMH register, 1946.1.8.62 is listed as “one of the types,” suggesting the possibility that Smith’s description was based on multiple specimens, although details are given for only a single specimen. Bocage (1895a), in his “*Herpetologia d’Angola et du Congo*,” remarked on some differences of material of *Uriechis capensis* from the Museu Bocage from typical material, but did not distinguish these individuals as new forms. In the same year, however, Boulenger (1895d), described three new species based on Bocage specimens, *Aparallactus bocagii*, from “Novo Redondo” [= Sumbe] and “Gambos,” Angola, *Aparallactus punctatolineatus* from “Biballa,” Angola, and *Aparallactus guentheri* from “Quindumbo,” Angola and East and Central Africa (Bocage 1897a). Boulenger (1895c) himself did not provide specific localities within Angola for these new taxa, but these may be inferred from Bocage (1895a, 1897a). Loveridge (1944c) and FitzSimons (1962) treated *A. bocagii* as a western subspecies of *A. capen-*

sis, and considered *A. punctatolineatus* a synonym. de Witte and Laurent (1947) and Laurent (1954a) maintained the subspecific distinctiveness of *A. c. punctatolineatus* based on what they believed were consistent differences from the nominate form. The latter author cited two new localities for *punctatolineatus* in Lunda Norte Province. More recent authors consider *A. punctatolineatus* and *A. bocagii* as synonyms of the typical form (Broadley and Cotterill 2004; Spawls et al. 2004; Bates et al. 2014; Wallach et al. 2014). Broadley (1990) examined the syntypes of *A. c. bocagii* in the Museum Bocage before they were destroyed and noted that they could not be distinguished from the typical form. The species *A. guentheri* is considered valid although it is limited to the eastern Africa and the Angola records should be assigned to *A. capensis* (Broadley 1990; Wallach et al. 2014).

Genus *Atractaspis* Smith, 1849

Atractaspis bibronii Smith, 1849

BIBRON'S STILETTO SNAKE

Atractaspis bibronii Smith 1849a: pl. 71 (see Notes below). Syntypes: BMNH 1946.1.18.19 (formerly 83.7.30.5) (collector A. Smith) and one unlocated specimen (*vide* Wallach et al. 2014). Type locality: "eastern districts of the Cape Colony" in error (see Notes below).

Atractaspis Bibroni: Bocage (1867c:227, 1870:68, 1895a:141).

Atractaspis bibronii: Boulenger (1896:515, 1915:223), Mertens (1937a:16, 1938a:442), Tilbury and Branch (1989:327), Broadley (1991a:498), Spawls and Branch (1995:31), Spawls et al. (2004:440), Nagy et al. (2005:226), Dobiey and Vogel (2007:21), Bates et al. (2014:349), Wallach et al. (2014:63), Branch and Conradie (2015:200).

Atractaspis bibroni rostrata: Laurent (1950a:11, 1950b:33, 1954a:62, 1964a:122), Thys van den Audenaerde (1966:36), Manaças (1981:42).

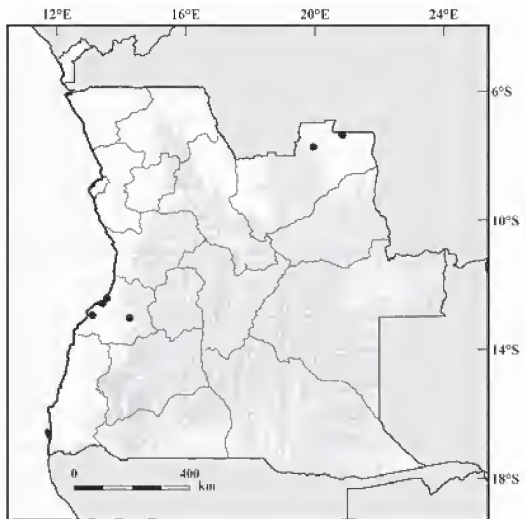
Atractaspis bibroni x *rostrata*: Broadley (1959:72).

Atractaspis bibronii bibronii: FitzSimons (1962:319), Broadley (1990:219).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widely distributed in sub-Saharan Africa, extending from Kenya and southern Somalia, southwards to Tanzania, Democratic Republic of Congo and Angola, western and northern Zambia, Mozambique to Zimbabwe, Botswana, Namibia and eastern portions of South Africa, as well as Swaziland.

Occurrences in Angola (Map 282): The species has been recorded in central western Angola and in the northeastern part of the country. **Lunda Norte:** "Dundo" [-7.36667, 20.83333] (Laurent 1950a:11, 1954a:62, 1964a:122; Manaças 1981:42); "Dundo, Barrage de la Luachimo" [-7.38333, 20.85000] (Thys van den Audenaerde 1966:36); "Carumbo" [-7.74422, 19.95467] (Branch and Conradie 2015:200). **Benguela:** "Catumbella" [-12.43333, 13.55000] (Bocage 1867c:227, 1895a:141; Monard 1937b:141; Laurent 1950b:32; Manaças 1981:41); "Benguella" [-12.58333, 13.41667] (Bocage 1895a:141; Monard 1937b:141; Laurent 1950b:32; Manaças 1981:41); "Dombe" [-12.95000, 13.10000] (Bocage 1895a:141; Monard 1937b:141; Laurent 1950b:32; Manaças 1981:41); "Cubal"



MAP 282. Distribution of *Atractaspis bibronii* in Angola.

[-13.03333, 14.25000] (Monard 1937b:141; Mertens 1937a:16, 1938a:442; Laurent 1950b:32; Manaças 1981:41).

Taxonomic and distributional notes: Smith's (1849) plate gives his new species name as *Atractaspis bibronii*, however, the accompanying three unnumbered pages of text give the name as *A. inornatus*, except for the last paragraph in which it is implied that the species is named for Bibron. *Atractaspis bibronii* does not occur in the area given by Smith as the type locality. FitzSimons (1962) considered the actual source of the types to be "Natal" and Broadley (1990) likewise considered the type locality "almost certainly Natal," but Broadley (1991a) suggested that "the northern Cape Province or the western Transvaal" was the likely source of the surviving BMNH syntype, as scale counts of the surviving syntype were inconsistent with specimens from Kwa-Zulu-Natal. Laurent (1950b) in his *Atractaspis* revision, treated *A. rostrata* Günther, 1868 as a subspecies of *A. bibronii* and later (Laurent 1964a) cited five specimens from Lunda Norte Province, Angola. Broadley (1959) recognized an intermediate form, *A. b. bibronii* x *rostrata*, with presumed extensive intergradation covering most of Zimbabwe (Broadley 1991a). Currently, *A. b. rostrata* is considered a synonym of *A. bibronii*, although Nagy et al. (2005) noted that there is considerable intraspecific variation within *Atractaspis bibronii*, suggesting that several cryptic taxa are currently subsumed under this name. Spawls and Branch (1995) and Dobiey and Vogel (2007) considered *Atractaspis bibronii* limited to the western regions of Angola, from Luanda to Benguela Province, however, in addition to Laurent (1964a), the species was recently collected by Branch and Conradie (2015) in "Carumbo," Lunda Norte Province.

Atractaspis boulengeri Mocquard, 1897

BOULENGER'S STILETTO SNAKE

Atractaspis Boulengeri Mocquard 1897a:54. Holotype: MNHN 1896.562 (collector E. Haug). Type locality: "les environs de Lambaréné, sur le bas Ogooué, Gabon" [= Lambarébé, Moyen-Ogooué], Gabon.

Atractaspis boulengeri mixta: Manaças (1981:40).

Atractaspis boulengeri: Spawls and Branch (1995:32), Chippaux (2006:193), Dobiey and Vogel (2007:22), Wallach et al. (2014:63).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from across Central Africa from southern Cameroon to the Democratic Republic of Congo.

Occurrences in Angola: The species presumably occurs in northwestern Angola, including the Cabinda enclave, Angola. There are no published records for this species for Angola, however Manaças (1981), Spawls and Branch (1995) and Dobiey and Vogel (2007) suggested its occurrence in northern Angola.

Taxonomic and distributional notes: Mocquard's original description in the *Bulletin du Muséum d'Histoire Naturelle* (1897a) was reprinted in *Bulletin de la Société Philomathique de Paris* in the same year (1897b) (Wallach et al. 2014).

Atractaspis congica Peters, 1877

CONGO STILETTO SNAKE

Atractaspis congica Peters 1877a:616, pl. Figs. 2, 2a–2c. Holotype: ZMB 8644 (collector F.W.A. von Mechow). Type locality: "Chinchoxo (Westafrika)" (Peters 1877a:616) [= Chinchoxo, Cabinda enclave], Angola.

Atractaspis congica: Peters (1881:150), Bocage (1887a:187, 1895a:142, 1897b:210), Ferreira (1904:116), Boulenger (1905:114), Schmidt (1933:15), Monard (1937b:141, 144), Themido (1941:11), Spawls and Branch (1995:33), Branch (1998:63), Broadley and Cotterill (2004:46), Broadley et al. (2003:83), Wallach et al. (2014:63).

Atractaspis aterrima: Bocage (1873a:223), Boulenger (1915:223), Chirio and LeBreton (2007:624).

Atractaspis congica congica: Hellmich (1957a:76, 1957b:76), Laurent (1950b:26), Manaças (1981:40), Chirio and LeBreton (2007:628).

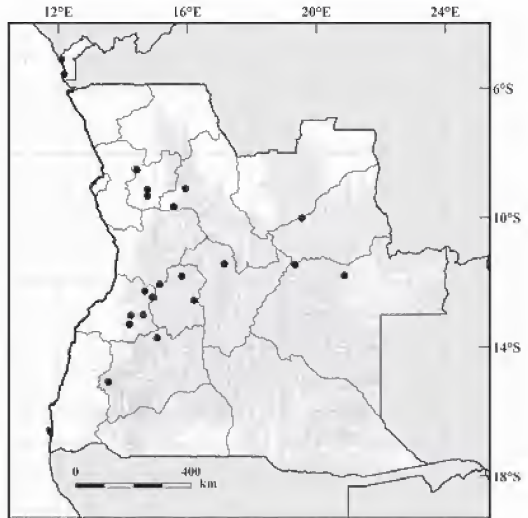
Atractaspis congica orientalis: Laurent (1964a:122-123), Manaças (1981:41), Broadley (1990:221).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species occurs from Cameroon through Democratic Republic of Congo to Angola and northern Zambia.

Ocurrences in Angola (Map 283): The species is widely distributed across much of Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:616; Bocage 1895a:142; Laurent 1950b:26; Manaças 1981:40); “Cabinda” [-5.55000, 12.18333] (Manaças 1981:40). **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:123); “Mutianvo” [-11.45000, 19.33333] (Themido 1941:11). **Moxico:** “environs du lac Calundo (arredores do Lago Calundo)” [-11.80000, 20.86667] (Laurent 1964a:122; Manaças 1981:41). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Boulenger 1905:114; Laurent 1950b:27; Manaças 1981:40); “Pungo-Adongo” [-9.66667, 15.58333] (Laurent 1950b:27; Manaças 1981:40). **Kwanza Norte:** “Piri-Dembos” [-8.53333, 14.43333] (Hellmich 1957b:76; Manaças 1981:40); “Golungo Alto” [-9.13333, 14.76667] (Boulenger 1905:114; Ferreira 1906:169; Monard 1937b:141; Laurent 1950b:27; Manaças 1981:40); “Cazengo” [-9.33333, 14.76667] (Ferreira 1904:116; Monard 1937b:141). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:15; Laurent 1950b:26; Manaças 1981:40). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:141, 144; Laurent 1950b:26; Manaças 1981:40); “Galanga” [-12.06667, 15.15000] (Bocage 1895a:142; Monard 1937b:141; Laurent 1950b:26; Manaças 1981:40); “Bela Vista” [-12.56667, 16.21667] (Hellmich 1957b:76; Manaças 1981:40). **Benguela:** “Quibula” [-12.28333, 14.68333] (Bocage 1895a:142; Monard 1937b:141; Laurent 1950b:26; Manaças 1981:40); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:142; Monard 1937b:141; Laurent 1950b:26; Manaças 1981:40); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:76; Manaças 1981:40); “Alto Cubal” [-13.03333, 14.25000] (Hellmich 1957b:76; Manaças 1981:40); “Hanha” [-13.30000, 14.20000] (Bocage 1897a:210; Laurent 1950b:26; Manaças 1981:40). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:142; Monard 1937b:141; Laurent 1950b:26; Manaças 1981:40); “Huíla” [-15.08333, 13.55000] (Bocage 1873a:223, 1895a:142; Monard 1937b:141; Manaças 1981:40). **Undetermined Locality:** “Cuango” (Peters 1881:150; Laurent 1950b:27; Manaças 1981:40) (Malanje Province impossible to georeference: See History Section for more detailed information).

Taxonomic and distributional notes: Laurent (1950b) noted that a subspecific distinction probably exists between populations separated by the Congo River, as there are considerable differences in terms of dorsal and ventral scales between the Angolan populations and those from the north. This species is sympatric with the Reticulate Stiletto Snake, *Atractaspis reticulata* (Sjöstedt, 1896), in northern Angola and around the mouth of the Zaire River (Spawls and Branch 1995).



MAP 283. Distribution of *Atractaspis congica* in Angola.

Atractaspis irregularis* (Reinhardt, 1843)*VARIABLE STILETTO ASP**

Elaps irregularis Reinhardt 1843:264, pl. 3, figs. 1–3. Holotype: ZMUC 6885 (collector J.R. Chenon). Type locality: “Guinea,” in error, “coast of Ghana” *fide* Hughes and Barry (1969:1032), restricted to the “vicinity of Accra, Ghana” by Rasmussen and Hughes (1997).

Atractaspis irregularis: Günther (1865a:480), Peters (1877a:616), Bocage (1895a:143), Boulenger (1915:223), Monard (1937b:141), Frade (1963:253), Spawls and Branch (1995:36), Chippaux (2006:186), Wallach et al. (2014:65).

Atractaspis corpulentus: Bocage (1866a:49).

Atractaspis irregularis parkeri: Laurent (1950b:17), Manaças (1981:41), Chippaux (2006:186).

Atractaspis irregularis irregularis: Chirio and LeBreton (2007:634).

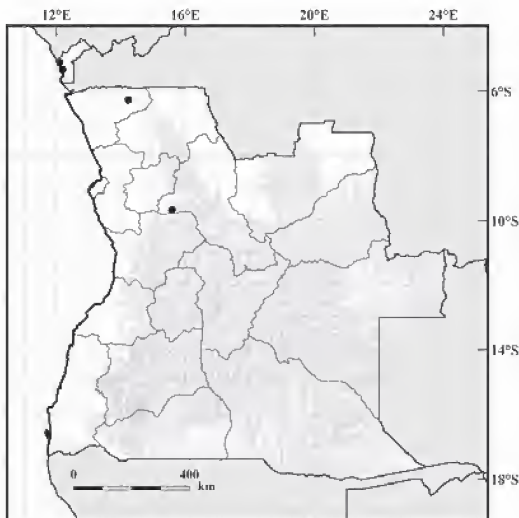
Atractaspis irregularis: Wallach et al. (2014:65).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is widely distributed across sub-Saharan Africa from Sierra Leone to the Central African Republic to South Sudan, Eritrea and Ethiopia and south to Tanzania, the Democratic Republic of Congo and northern Angola.

Occurrences in Angola (Map 284): The species has been reported from the northwestern regions of the country, including the Cabinda enclave. **Cabinda:** “Chinchoxo” [−5.10000, 12.10000] (Peters 1877a:616; Laurent 1950b:17; Manaças 1981:41); “Molembo” [−5.33333, 12.20000] (Bocage 1895a:143; Monard 1937b:141; Manaças 1981:41). **Zaire:** “S. Salvador do Congo” [−6.26667, 14.23333] (Bocage 1895a:143; Monard 1937b:141; Laurent 1950b:17; Manaças 1981:40). **Malanje:** “Pungo Andongo” [−9.66667, 15.58333] (Günther 1865a:480).

Taxonomic and distributional notes: In addition to the nominate form, which occurs in Angola, four other subspecies are currently recognized.



MAP 284. Distribution of *Atractaspis irregularis* in Angola.

Atractaspis reticulata heterochilus* Boulenger, 1901*RETICULATE STILETTO SNAKE**

Atractaspis heterochilus Boulenger 1901:13, pl. V, fig. 1. Type: MRAC 9321 (collector Capt. Hecq). Type locality: “des environs d’Albertville, sur le Tanganika” [= Kalemie, Tanganyika Province], Democratic Republic of Congo.

Atractaspis reticulata heterochilus: Hellmich (1957b:77), Spawls and Branch (1995:39).

Atractaspis reticulata heterochilus (*Atractaspis heterochilus*): Manaças (1981:42).

Atractaspis reticulata heterochilus: Chippaux (2006:192), Chirio and LeBreton (2007:636), Dobiey and Vogel (2007:30).

Atractaspis reticulata: Wallach et al. (2014:66).

Global conservation status (IUCN): Data Deficient.

Global distribution: The subspecies is known from southern Cameroon, through Equatorial Guinea, Congo, large portions of the Democratic Republic of Congo to northwestern Angola, possibly including the Cabinda enclave.

Ocurrences in Angola (Map 285): The species occurs in the northwestern regions of the country. **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:77; Manaças 1981:42).

Taxonomic and distributional notes: Chippaux (2006, 2009) incorrectly placed the type locality of *Atractaspis heterochilus* in Tanzania. Dobiey and Vogel (2007) indicated a presumed range across northwestern Angola including Cabinda, but did not show its distribution as including the type locality of Albertville, or any part of the eastern Democratic Republic of Congo. Angola was not included in the distribution as stated by Wallach et al. (2014).



MAP 285. Distribution of *Atractaspis reticulata heterochilus* in Angola.

Genus *Boaedon* Duméril, Bibron and Duméril, 1854

Boaedon angolensis Bocage, 1895

ANGOLAN HOUSE SNAKE (Endemic)

Boodon lineatus var. *angolensis* Bocage 1895a:80. Syntypes: MBL specimen numbers unknown (collectors F.A.P. Bayão [Duque de Bragança], Padre A. Barroso [St. Salvador du Congo], J.A. d’Anchieta [Ambaca, Quissange, Cahata, Galanga, Caconda, Biballa, Huilla, Gambos, Humbe], destroyed by fire 18 March 1978 [some specimens may have been exchanged and survived in other collections]. Type locality: “Duque de Bragança ... St. Salvador du Congo ... Ambaca, Quissange, Cahata, Galanga, Caconda, Huilla, Gambos, Biballa et Humbe”, [= Calandula (Malanje Province) ... M’Banza Congo (Zaire Province) ... Ambaca (Kwanza Norte Province) ... Galanga (Huambo Province) ... Quissange, Caota (Benguela Province) ... Caconda, Huilla, Chiange (Huila Province) ... Bibala (Namibe Province) and Humbe (Cunene Province)], Angola.

Boodon lineatus var. *angolensis*: Bocage (1896a: 112, 1897b:211), Ferreira (1900a:51).

Boodon lineatus: Ferreira (1897b:244, 1904:114), Monard (1937b:113).

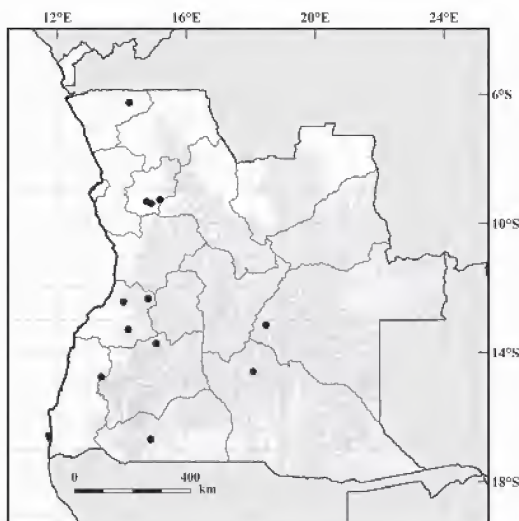
Boaedon lineatus: Wallach et al. (2014:96).

Boaedon cf. *angolensis*: Conradie et al. (2016:22).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is endemic to Angola.

Ocurrences in Angola (Map 286): Zaire: “St. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:80; Monard 1937b:113). **Kwanza Norte:** “Ambaca” [-9.26667, 15.18333] (Bocage 1895a:80; Ferreira 1900:48; Monard 1937b:113); “Cazengo” [-9.33333, 14.76667] (Ferreira 1900a:48);



MAP 286. Distribution of *Boaedon angolensis* in Angola.

“Cacullo” [-9.38333, 14.91667] (Ferreira 1904:114; Monard 1937b:113); **Benguela**: “Cahata” [-12.35000, 14.81667] (Bocage 1895a:78); “Quissange” [-12.43333, 14.05000] (Bocage 1895a:80); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:112, 1897b:211). **Huíla**: “Caconda” [-13.73333, 15.06667] (Bocage 1895a:80; Ferreira 1897b:244; Monard 1937b:113). **Namibe**: “Biballa” [-14.76667, 13.36667] (Bocage 1895a:80). **Cunene**: “Humbe” [-16.68333, 14.90000] (Bocage 1895a:80). **Moxico**: “upper Cuito River” (photographed) [-13.15139, 18.48056] (Conradie et al. 2016:22). **Cuando Cubango**: “Cuito basin (50)” [-14.59517, 18.07111] (Conradie et al. 2016:9, 12, 22). **Undetermined Locality**: “Cacolo até às margens do Bengo” (Ferreira 1900a:48).

Taxonomic and distributional notes: *Boaedon angolensis* Bocage, 1895, was described by Bocage (1895a) as a variety of *Boaedon lineatus* Duméril, Bibron and Duméril, 1854, but was long forgotten and/or considered as a synonym of *Boaedon fuliginosus* or *B. lineatus*. Laurent (1956) mentioned that Angolan populations could be distinguished morphologically from other house snakes, but he did not discuss the availability of *B. angolensis*. The status of *B. angolensis* and related forms in Angola is under active review and both its taxonomic status and its distribution will be revised in the near future. Additional literature references to members of the *B. fuliginosus* complex may belong in the chresonymy of *B. angolensis*, but the most cannot be resolved without consulting the referred specimens

***Boaedon variegatus* (Bocage, 1867)**

VARIEGATED HOUSE SNAKE (Endemic)

Alopecion variegatum Bocage 1867b:227, 1867d:230. Syntypes: MBL specimen numbers not known. Type locality: “Benguella” and “Novo Redondo” (Bocage 1867d:230) [= Benguela (Benguela Province) and Sumbe (Kwanza Sul Province)] Angola.

Boodon lineatus: Bocage (1895a:80), Boulenger (1893:332), Monard (1937b:113).

Boaedon fuliginosus fuliginosus: Loveridge (1957:251).

Global conservation status (IUCN): Not Evaluated.

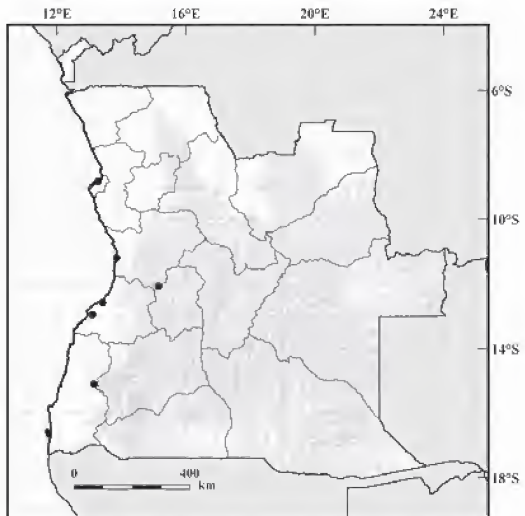
Global distribution: The species is endemic to Angola.

Occurrences in Angola (Map 287): Luan-

da: “Loanda” [-8.83333, 13.26667] (Bocage 1895a:80, Ferreira 1900a:48; Monard 1937b:113). **Kwanza Sul**: “Novo Redondo” [-11.20000, 13.85000] (Bocage 1867b:227, 1867d:230, 1895a:80; Monard 1937b:113; Loveridge 1957:251). **Huambo**: “Galanga” [-12.06667, 15.15000] (Bocage 1895a:78). **Benguela**: “Dombe” [-12.95000, 13.10000] (Bocage 1867b:227, 1895a:80; Monard 1937b:113); “Benguella” [-12.58333, 13.41667] (Bocage 1867b:227, 1895:78; Boulenger 1893:333; Loveridge 1957:251); **Namibe**: “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:80; Monard 1937b:113).

Taxonomic and distributional notes:

Alopecion variegatum has variously been considered as a synonym of other taxa in the *B. fuliginosus* complex, but recent collections and ongoing reviews support its specific distinctness. The status of *B. variegatus* and related forms in Angola is under active review and both its taxonomic status and its distribution will be revised in the near future. Additional literature references



MAP 287. Distribution of *Boaedon variegatus* in Angola.

to members of the *B. fuliginosus* complex may belong in the chresonymy of *B. variegatus*, but the most cannot be resolved without consulting the referred specimens.

***Boaedon fuliginosus* complex (Boie, 1827)**

BROWN HOUSE SNAKE

Lycodon fuliginosus: Boie (1827: column 551). Type(s): unknown, RMNH?. Type locality: “Erp. de Java ist das Vaterland bekannt” (Boie 1827:column 551). Boie (1827) listed this species under Asian species of *Lycodon* and cited the unpublished *Erpétology de Java* as the source for the name. It is unclear why the manuscript title was run together with “ist der Vaterland bekannt.” This may imply “Java” as the type locality, or it may have been an error for “Der Vaterland is unbekannt.”

Boaedon lineatum: Bocage (1866a:49, 1867b:227), Parker (1936:122).

Boedon quadrilineatum: Bocage (1879c:89).

Boodon quadrilinaetus: Peters (1881:149).

Boodon lineatus: Günther (1865a:480), Bocage (1895a:78), Boulenger (1893:332, 1896:616, 1905:112), Ferreira (1897b:244, 1900a:51, 1903:10, 1904:114, 1906:167), Monard (1937b:113, 117), Themido (1941:9).

Boaedon lineatus: Schmidt (1933:13), Loveridge (1936a:22), Mertens (1937a:12, 1938a:439).

Boaedon lineatus lineatus: Bogert (1940:21), Laurent (1950a:7, 1954a:43, 1964a:93), Hellmich (1957a:71, 1957b:60), Thys van den Audenaerde (1966:32).

Boaedon fuliginosus fuliginosus (*Baedon lineatus*): Manaças (1973:190).

Lamprophis fuliginosus: Trapé and Mané (2006:114), Chirio and LeBreton (2007:456), Ceriaco et al. (2016b:85).

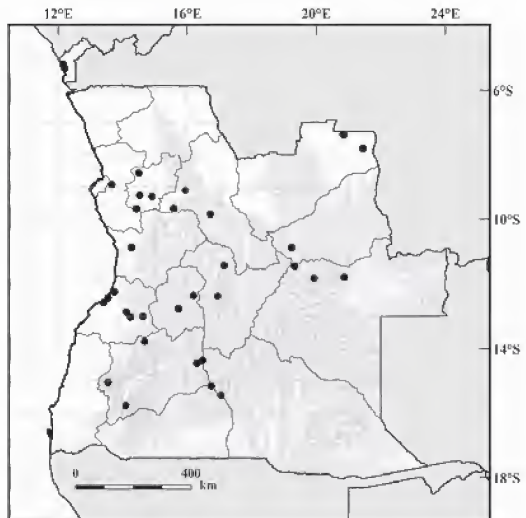
Boaedon fuliginosus: Kelly et al. (2011:424), Wallach et al. (2014:95), Greenbaum et al. (2015:18), Wallach et al. (2014:95).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species complex is known from southern Morocco to South Africa.

Ocurrences in Angola (Map 288): Mem-

bers of this complex are present throughout Angola with the exception of the desert regions of the far southwestern Angola. **Cabinda:** “Landana” [-5.20000, 12.15000] (Bocage 1895a:78; Monard 1937b:113); “Molembo” [-5.33333, 12.20000] (Bocage 1895a:78; Monard 1937b:113). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:7, 1954a:43, 1964a:93; Thys van den Audenaerde 1966:32); “Dundo, Barrage de la Luachimo” [-7.38333, 20.85000] (Thys van den Audenaerde 1966:32); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1954a:43); “Rio Luinha” [-9.26667, 14.53333] (Ferreira 1906:167; Monard 1937b:113). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:93); “Mutianvo” [-11.45000, 19.33333] (Themido 1941:9). **Bengo:** “Cabiri” [-8.91667,



MAP 288. Distribution of *Boaedon fuliginosus* complex in Angola.

13.66667] (Loveridge 1936a:22). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:60); “N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1903:10; Monard 1937b:113); “Dondo” [-9.68333, 14.43333] (Bocage 1895a:78; Monard 1937b:113). **Malanje:** “Duque de

Bragança" [-9.10000, 15.95000] (Bocage 1866a:49, 1895a:78; Monard 1937b:113); "Pungo-Andongo" [-9.66667, 15.58333] (Günther 1865a:480; Boulenger 1893:332-334, 1905:112; Monard 1937b:113); "Cangandala National Park" [-9.84606, 16.72233] (Ceríaco et al. 2016b:85). **Mexico:** "environs du lac Calundo" [-11.80000, 20.86667] (Laurent 1964a:93); "Rio Calombe, Luso" [-11.83333, 19.93333] (Mananças 1973:190). **Bié:** "Chitau" [-11.43333, 17.15000] (Schmidt 1933:13); "Bihé" [-12.38333, 16.95000] (Bocage 1879c:89). **Huambo:** "Bela-Vista (Sanguengue)" [-12.36667, 16.20000] (Hellmich 1957b:60); "Huambo" [-12.76667, 15.73333] (Themido 1941:9). **Kwanza Sul:** "Congulu" [-10.86667, 14.28333] (Parker 1936:122); "Lembu (Serra de Selles)" [-12.86667, 14.11667] (Ferreira 1904:114). **Benguela:** "Catumbella" [-12.43333, 13.55000] (Bocage 1895a:78; Monard 1937b:113); "Benguella" [-12.58333, 13.41667] (Bocage 1867b:227, 1895a:78; Boulenger 1893:333); "Entre Rios" [-13.01667, 14.63333] (Hellmich 1957a:71); "Cubal" [-13.03333, 14.25000] (Mertens 1937a:12, 1938a:439; Hellmich 1957b:60); "Hanha" [-12.25000, 13.75000] (Bogert 1940:21). **Huila:** "Kalukembé" [-13.78333, 14.68333] (Monard 1937b:113, 117); "Kuvangu (Vila-da-Ponte)" [-14.46667, 16.30000] (Monard 1937b:113, 117); "Huilla" [-15.05000, 13.55000] (Bocage 1895a:78); "Gambos" [-15.76667, 14.10000] (Bocage 1895a:80). **Cunene:** "fl. Mbalé" [-15.16667, 16.75000] (Monard 1937b:113, 117). **Cuando Cubango:** "Kutatu" [-14.36667, 16.48333] (Monard 1937b:113, 117); "Kakindo" [-15.45000, 17.05000] (Monard 1937b:113, 117). **Undetermined Locality:** "without precise location" (Bocage 1867b:227); "Cuango" (Peters 1881:149) (Malanje Province impossible to georeference: See History Section for more detailed information).

Taxonomic and distributional notes: The *Boaedon fuliginosus* complex, includes *Boaedon lineatus* Duméril, Bibron and Duméril, 1854, *Boaedon fuliginosus* (Boie, 1827) and *Boaedon capensis* (Bibron and Duméril, 1854) as well as the taxa *B. angolensis* and *B. variegatus*, listed above. Recent molecular analyses conducted by Kelly et al. (2011) demonstrated extensive genetic variation in the widespread *B. fuliginosus*, suggesting several cryptic species are present. Several names are available for putative taxa within the *B. fuliginosus* complex, and additional genetic sampling and extensive morphological analyses are needed to update the taxonomy of this group (Greenbaum et al. 2015). Broadley et al. (in prep) are trying to evaluate species boundaries in the group and the concomitant application of names. Wallach et al. (2014) assigned the Angolan records to *B. fuliginosus*, however, we have separately listed those records which appear to be unambiguously assignable to *B. angolensis* and *B. variegatus*. Citation records in this account may also refer to one of these other taxa, but this cannot be determined without a more thorough revision.

***Boaedon olivaceus* (Duméril, 1856)**

OLIVE HOUSE SNAKE

Holuropholis olivaceus Duméril 1856:466. Holotype: MNHN 3408 (collector C.E. Aubry-Lecomte). Type locality: "Gabon."

Holuropholis olivaceus: Peters (1877a:615).

Boodon olivaceus: Bocage (1895a:81).

Boaedon olivaceus: Boulenger (1915:202), Laurent (1954a:43), Loveridge (1957:251), Frade (1963:252), Thys van den Audenaerde (1966:32), Wallach et al. (2014:97).

Lamprophis olivaceus: Chiro and LeBreton (2007:460).

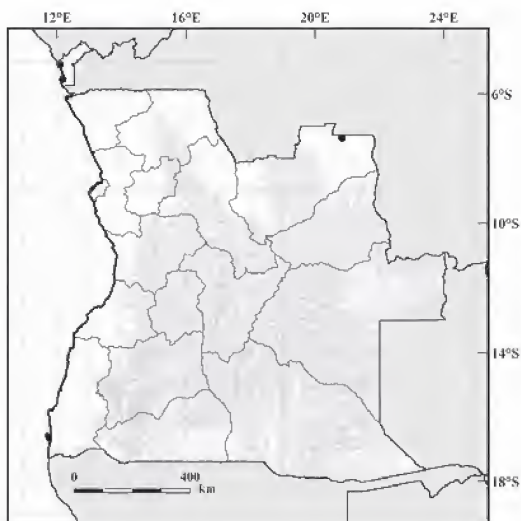
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from west and central Africa, from Guinea to Central African Republic, south to the Democratic Republic of the Congo, and northern Angola and east to Rwanda and Uganda.

Occurrences in Angola (Map 289): The species occurs in the Cabinda enclave and Lunda

Norte Pronvice. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615; Bocage 1895a:81); “Cabinda” [-5.55000, 12.18333] (Frade 1963:252). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954:43; Thys van den Audenaerde 1966:32).

Taxonomic and distributional notes: Kelly et al. (2011) provided molecular phylogenetic data to support the inclusion of this taxon along with the *B. fuliginosus* complex within a monophyletic *Boaedon*, separate from *Lamprophis sensu stricto*.



MAP 289. Distribution of *Boaedon olivaceus* in Angola.

Genus *Bothrophthalmus* Peters, 1863

Bothrophthalmus lineatus Peters, 1863

RED-BLACK STRIPED SNAKE

Bothrophthalmus lineatus (*nomem nudum*) Schlegel in Lichtenstein and von Martens 1856:27. Type locality: “Goldküste.”

Elaphis (*Bothrophthalmus*) *lineatus* Peters 1863:287. Holotype: ZMB 1820 (“aus dem Museum zu Leiden”). Type locality: “Guinea” [= Ghana] *fide* Hughes and Barry (1969:1013).

Bothrophthalmus lineatus lineatus: Laurent (1950b:8, 1954:44, 1964a:93), Loveridge (1957:249), Thys van den Audernaede (1966:32).

Bothrophthalmus lineatus: Spawls et al. (2004:316), Chirio and LeBreton (2007:386), Wallach et al. (2014:112).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Uganda, southwest to northern Angola, west to Guinea, with sporadic records from Uganda and west Rwanda.

Ocurrences in Angola (Map 290): The species is known from extreme northeastern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950b:8, 1954a:44; Thys van den Audernaede 1966:32); “Riv. Luachimo, Dundo” [-7.38333, 20.85000] (Laurent 1964a:93); “Riv. Mussungue, environs de Dundo” [-7.41667, 20.83333] (Laurent 1964a:93).

Taxonomic and distributional notes: The original use of the name was as a *nomen nudum* in the *Nomenclator* of Lichtenstein and von Martens (1856), who attributed the name



MAP 290. Distribution of *Bothrophthalmus lineatus* in Angola.

to Schlegel, but provided no details other than a locality. Peters' (1863) description used this name, again attributed to Schlegel, but as the description itself was that of Peters, he alone is the authority for the nomen. Authorship of the *Nomenclator* has been cited in various ways. Lichtenstein alone is often given credit for names in this work, but the preface states that the majority of the preparation of the *Nomenclator*, including the descriptions, was due to von Martens (see Harris and Kluge 1984; Ulber 2003). David Weinland also contributed to the publication (Adler 2012), although his status as an author on the publication is unresolved.

Genus *Dromophis* Schlegel, 1837

Dromophis lineatus (Duméril, Bibron and Duméril, 1854)

LINED OLYMPIC SNAKE

Dryophylax lineatus Duméril, Bibron and Duméril 1854:1124. Syntypes: MNHN 7643–7644 (collector B. d'Arnaud). Type locality: “Nil blanc” (Duméril, Bibron and Duméril 1854:1126), [= Upper Nile, Jonglei or Central Equatoria Province, South Sudan *vide* Wallach et al. 2014].

Dromophis lineatus: Bogert (1940:79), Hughes (2004:74), Broadley and Cotterill (2004:49), Wallach et al. (2014:240).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Senegal east to Ethiopia, south to Angola, Zambia and northern Malawi.

Occurrences in Angola: Recorded in the literature from “Angola” with no precise information (Bogert (1940:79); Loveridge (1940:9); Hughes (2004:74).

Taxonomic and distributional notes: Bogert (1940) cited the species for “Angola” without information about the collection site. The genus *Dromophis* has been treated as a synonym of *Psammophis* by Kelly et al. (2008), but has been recognized as valid by Hughes 2004, 2013), Wallach et al. (2014) and most other modern authors. Likewise the history of the nomen *D. lineatus* has been intertwined with that of *Psammophis sibilans* (Linnaeus, 1758) (see Hughes 2004 for a summary and comment).

Genus *Gonionotophis* Boulenger, 1893

Gonionotophis brussauxi (Mocquard, 1889)

MOCQUARD'S FILE SNAKE

Godionotus brussauxi Mocquard 1889:146. Holotype: MNHN 1890.54 (collector E. Brussaux). Type locality: “Loudinia-Niara, sur le fleuve Niari, entre Loango sur le littoral, et Brazzaville sur le fleuve Congo” [= between Loudinia on the Niara River], Congo.

Gonionotophis brussauxi: Laurent (1954a:44), Chippaux (2006:91), Chirio and LeBreton (2007:428), Vidal et al. (2008:57), Kelly et al. (2011:425), Wallach et al. (2014:308), Lanza and Broadley (2014:89), Broadly et al. (2018:7).

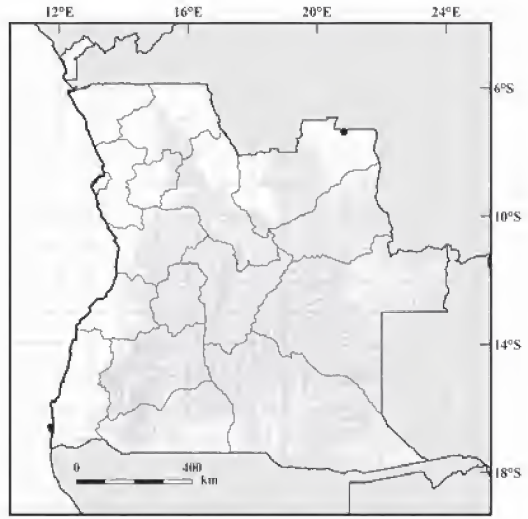
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Cameroon to the Democratic Republic of Congo, and extreme northeastern Angola.

Occurrences in Angola (Map 291): The species is known from extreme northeastern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:44).

Taxonomic and distributional notes: The Dundo record of Laurent (1954a) probably represents the southernmost limit of the species. Loveridge (1939) remarked on the close relationship between the two file snake genera *Mehelya* and *Gonionotophis* Boulenger, 1893, and later, Vidal et al. (2008) and Kelly et al. (2011) determined that *Gonionotophis brussauxi* (Mocquard, 1889), type species of *Gonionotophis*, is nested within *Mehelya*. In order to maintain monophyletic genera, Kelly et al. (2011) transferred all species placed in *Mehelya* Csiki, 1903 to *Gonionotophis*,

which has priority over all other available names (Lanza and Broadley 2014). More recently, Broadley et al. (2018) split *Gonionotophis* into four genera, with *brussauxi* being the only Angolan species remaining in the genus.



MAP 291. Distribution of *Gonionotophis brussauxi* in Angola.

Genus *Hemirhagerhis* Boettger, 1896

Hemirhagerhis viperina (Bocage, 1873)

WESTERN BARK SNAKE

Psammophylax viperinus Bocage 1873a:222. Holotype: MBL 1715 (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: "Dombe" [= Dombe Grande], Benguela Province, Angola.

Psammophylax nototaenia: Bocage (1895a:109).

Amplorhinus nototaenia: Boulenger (1915:211).

Amplorhinus nototaenia (*Psammophylax nototaenia*): Monard (1937b:128).

Hemirhagerhis nototaenia viperinus: Bogert (1940:76), FitzSimons (1962:208), Laurent (1964a:112), Broadley (1990:120).

Hemirhagerhis viperina: Broadley (1997c:164), Branch (1998:86), Broadley and Hughes (2000:7), Wallach et al. (2014:321).

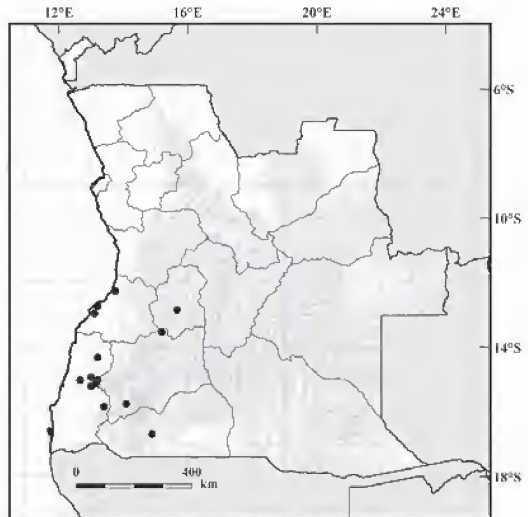
Hemirhagerhis nototaenia: Branch (1998:86), Wallach et al. (2014:320).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southwestern Angola to northern Namibia.

Occurrences in Angola (Map 292): The species occurs in the southwestern Angola.

Huambo: "Huambo" [-12.83333, 15.66667] (Bogert 1940:75; Broadley 1997c:164; Broadley and Hughes 2000:9). **Benguela:** "Dombe" [-12.95000, 13.10000] (Bocage 1873a:222, 1895a:109; Monard 1937b:128; FitzSimons 1962:208; Broadley 1990:120, 1997c:161, 164; Broadley and Hughes 2000:9); "Hanha" [-12.25000, 13.75000]



MAP 292. Distribution of *Hemirhagerhis viperina* in Angola.

(Bogert 1940:76; Broadley 1997c:164; Broadley and Hughes 2000:9). **Huila**: “Humpata, Fazenda Bumbo” [-15.20000, 13.00000] (Laurent 1964a:112; Broadley 1997c:164; Broadley and Hughes 2000:9); “8 km from Tundavala to Sa da Bandeira” [-15.83333, 13.40000] (Broadley 1997c:164; Broadley and Hughes 2000:9); “5 km S of Chibemba” [-15.75000, 14.08333] (Broadley 1997c:164; Broadley and Hughes 2000:9). **Namibe**: “Huxe” [-12.71667, 13.20000] (Broadley 1997c:164; Broadley and Hughes 2000:9); “Lungo” [-14.31667, 13.20000] (Broadley 1997c:164; Broadley and Hughes 2000:9); “Munhino” [-14.91667, 13.00000] (Bogert 1940:76; Broadley 1997c:164; Broadley and Hughes 2000:9); “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:109; Broadley 1997c:161, 164; Broadley and Hughes 2000:9); “Caraculo” [-15.01667, 12.66667] (Broadley 1997c:164; Broadley and Hughes 2000:9); “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:109; Broadley 1997c:161, 164; Broadley and Hughes 2000:9). **Cunene**: “Humbe” [-16.68333, 14.90000] (Bocage 1895a:109; Broadley 1997c:161).

Taxonomic and distributional notes: Bocage (1873a) described *Psammophylax viperinus* based on one individual from “Dombe” collected by Anchieta in Benguela Province. Subsequently he (Bocage 1895a) synonymized *P. viperinus* with *P. nototaenia* (Günther, 1864) and recorded six specimens from southwestern Angola: two from “Maconjo,” one from “Capangombe,” two from “Humbe,” and the “Dombe” *viperinus* specimen. Broadley (1997c) examined the material in Museu Bocage in 1968, and found only five specimens, the one from “Dombe” and two each from “Maconjo” and “Capangombe” (the reason for the discrepancy in the number of specimens from Capangombe is unknown). He suggested that the missing specimens from “Humbe” may have been typical *H. nototaenia*. However, *H. nototaenia* extends from Kenya to South Africa and Mozambique, whereas *H. viperina* is widely distributed from southwestern Angola to northern Namibia (Broadley 1990, 1997c; Broadley and Hughes 2000), suggesting that all records from Angola are correctly interpreted as *H. viperina*.

Genus *Hypoptophis* Boulenger 1908

Hypoptophis wilsonii Boulenger, 1908

WEDGE-SNOURED BURROWING SNAKE

Hypoptophis wilsonii Boulenger 1908:93. Holotype: BMNH 1946.1.2.99 (formerly BMNH 1908.6.16.5) (collector H. Wilson). Type locality: “Inkongo, on the Sankuru River, in the Kassai Province of the Congo” (Boulenger 1908:93), [= Inkongo, Kasai Oriental Province], Democratic Republic of Congo.

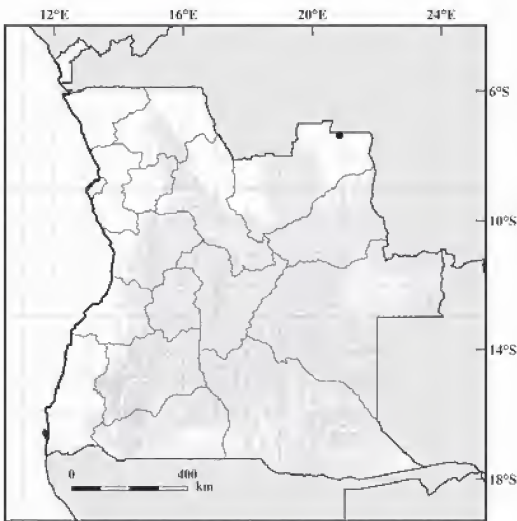
Hypoptophis wilsoni katangae: de Witte and Laurent (1947:93), Laurent (1950a:10).

Hypoptophis wilsonii: Broadley et al. (2003:91), Broadley and Cotterill (2004:47), Wallach et al. (2014:337).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from from the Congo Basin south to Katanga in Democratic Republic of Congo, western Zambia and northeastern Angola.

Occurrences in Angola (Map 293): The species is only reported from “Dundo” in the extreme northeast of the country near the



MAP 293. Distribution of *Hypoptophis wilsoni* in Angola.

border with the Democratic Republic of Congo. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:10).

Taxonomic and distributional notes: This species was originally described from the central Congo basin and is considered rare being known only from few specimens (Broadley et al. 2003). Müller (1911) described *Michellia katangae*, from “Kituri, Katanga district,” Congo, and de Witte and Laurent (1947) considered it a subspecies of *Hypoptophis wilsonii* Boulenger, 1908, which is currently viewed as a monotypic (Wallach et al. 2014). Wallach et al. (2014) did not include Angola in the species distribution.

**Genus *Limaformosa* Broadley, Tolley, Conradie, Wishart,
Trape, Burger, Kusamba, Zassi-Boulou and Greenbaum, 2018**

***Limaformosa capensis* (Smith, 1847)**

SOUTHERN FILE SNAKE

Heterolepis capensis Smith 1847a: pl. 55, first of two accompanying unnumbered text pages. Holotype: lost *fide* FitzSimons (1937). Neotype: BMNH 1891.9.15.9 (donated by W.L. Sclater, SAM), designated by Broadley (2005) *fide* Lanza and Broadley (2014:90). Holotype locality: “eastern districts of the Cape Colony” [= South Africa], locality rejected by Broadley (2005); Neotype locality: “Delagoa Bay” [= Maputo Bay, Maputo Province], Mozambique.

Simocephalus capensis: Monard (1937b:111, 119).

Mehelya capensis capensis: Loveridge (1939:143, 1957:253), Laurent (1964a:94), Branch and McCartney (1992:2), Broadley and Cotterill (2004:48).

Mehelya capensis: Broadley (2005:232), Chirio and LeBreton (2007:476), Wallach et al. (2014:424).

Gonionotophis capensis: Kelly et al. (2011:424), Lanza and Broadley (2014:90).

Limaformosa capensis: Broadley et al. (2018:5).

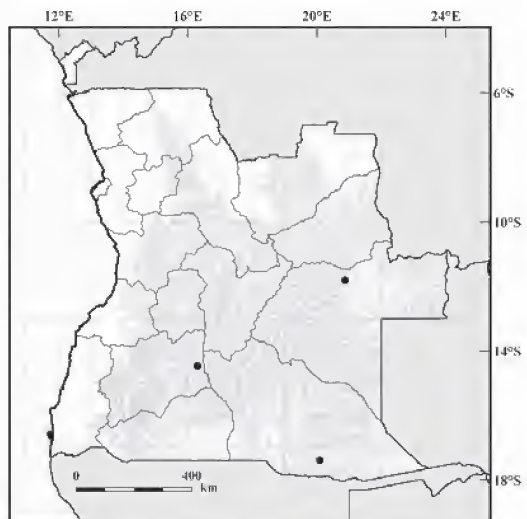
Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Southeastern Africa, north to eastern Angola and Zambia, southeastern Democratic Republic of Congo (former Katanga Province), Malawi and southeastern Tanzania as far north as the eastern Usambara Mountains.

Occurrences in Angola (Map 294): The species is known from the southeastern part of the country. **Moxico:** “Rives du lac Calundo, 105 km à l’est de Luso (Lake Calundo)” [-11.80000, 20.86667] (Laurent 1964a:94).

Huíla: “Vila-da-Ponte” [-14.46667, 16.30000] (Monard 1937b:113, 119; Loveridge 1939:144). **Cuando Cubango:** “vicinity of Cuito Cuanavale - approximately 14 km NE of Mapupa” [-17.38333, 20.08333] (Branch and McCartney 1992:2).

Taxonomic and distributional notes: Wallach et al. (2014) credited Lanza and Broadley (2014) with the neotype designation, but this was originally proposed by Broadley (2005). Kelly et al. (2011) argued that *Gonionotophis* is the appropriate name for species previously assigned to *Mehelya* Csiki, 1903, but more recently Broadley et al. (2018) erected the new genus *Limaformosa*, with *capensis* as its type species. Records from



MAP 294. Distribution of *Limaformosa capensis* in Angola.

further north in Central Africa (Chippaux 2006; Chirio and LeBreton 2007) require confirmation (Wallach et al. 2014).

***Limaformosa vernayi* (Bogert, 1940)**

ANGOLA FILE SNAKE

Mehelya vernayi Bogert 1940:28, figs. 1a–e, 2. Holotype: AMNH 51795 (collector A.S. Vernay, H. Lang and R. Boulton). Type locality: “Hanha” [Hanha do Norte], Benguela Province, southwestern Angola.

Mehelya vernayi: Broadley (1990:99), Haacke (1981:221), Branch (1998:79), Wallach et al. (2014:427).

Gonionotophis vernayi: Kelly et al. (2011:425).

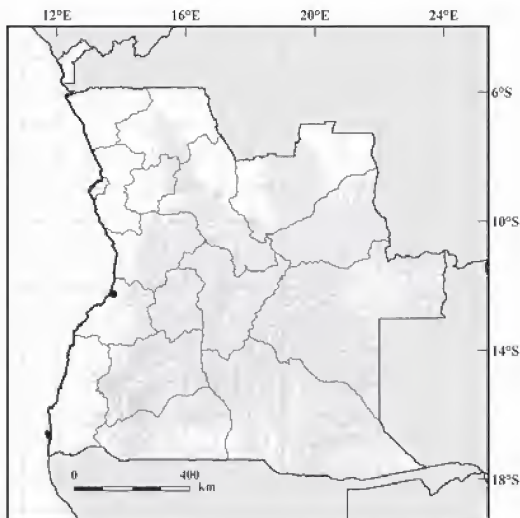
Limaformosa vernayi: Broadley et al. (2018:5).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from western Angola and northern Namibia.

Ocurrences in Angola (Map 295): The species has only been recorded from the type locality “Hanha” in Benguela Province, although is probably more widespread species in the western Angola. **Benguela:** “Hanha” [-12.25000, 13.75000] (Bogert 1940:29; Haacke 1981:221; Wallach et al. 2014:427).

Taxonomic and distributional notes: See *Limaformosa capensis*.



MAP 295. Distribution of *Limaformosa vernayi* in Angola.

Genus *Lycophidion* Fitzinger, 1843

***Lycophidion hellmichi* Laurent, 1964**

HELLMICH'S WOLF SNAKE

Lycophidion hellmichi Laurent 1964a:95, fig. 29. Holotype: MD 3824 (collector H. Baumann). Type locality: “Kapolopopo, désert de Moçâmedes ... ± 15.55 S 12.42 E, ± 450 m” (coordinates provided by Laurent 1964a:19) [= Capolopopo, Namib Desert], Namibe Province, Angola.

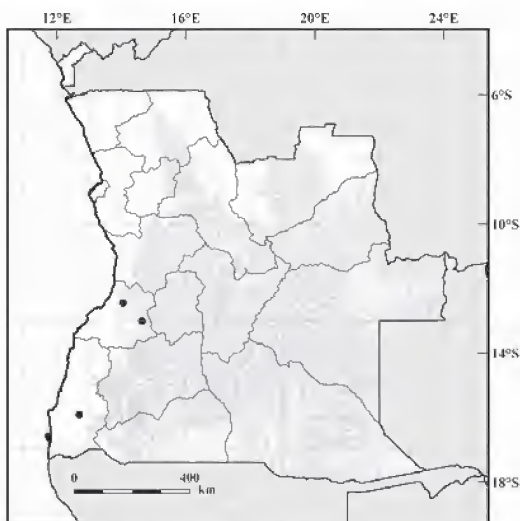
Lycophidion hellmichi: Haacke (1970:281), Laurent (1968:479), Broadley (1990:95, 1991b:212, 1992b:35, 1996b:17), Branch (1998:77), Bauer et al. (2001:78), Wallach et al. (2014:401).

Lycophidion capense capense: Hellmich (1957a:71).

Global conservation status (IUCN): Data Deficient.

Global distribution: The species is known from western Angola and northern Namibia.

Ocurrences in Angola (Map 296): The species occurs in southwestern Angola.



MAP 396. Distribution of *Lycophidion hellmichi* in Angola.

Benguela: “Entre-Rios” [-13.01667, 14.63333] (Hellmich 1957a:71; Laurent 1964a:95; Broadley 1996b:18); “Quissange” [-12.43333, 14.05000] (Broadley 1996b:18). **Namibe:** “Kapolopopo désert de Moçâmedes (Kapolopopo)” [-15.91667, 12.70000] (Laurent 1964a:95; Broadley 1990:95, 1991b:212, 1996b:18).

Taxonomic and distributional notes: This species was described by Laurent (1964a) based on the holotype from “Kapolopopo” and a ZSM paratype from Entre Rios. The northern distributional limits for this species remain unknown due to limited collection in Angola (Bauer et al. 2001).

Lycophidion laterale Hallowell, 1857

FLAT WOLF SNAKE

Lycophidion laterale Hallowell 1857:58. Holotype: ANSP 10268 (collector H.A. Ford). Type locality: “Gaboon country” (Hallowell 1857:59), Gabon.

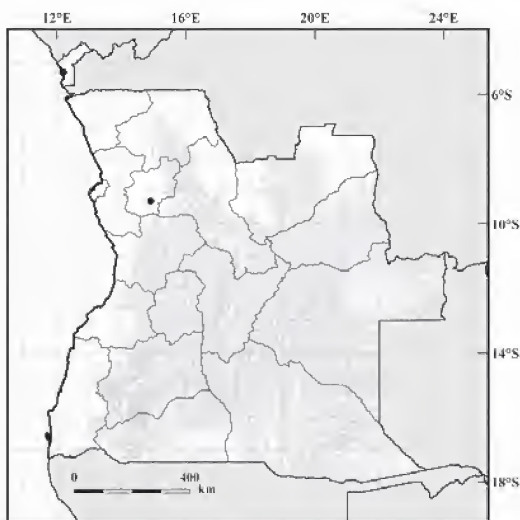
Lycophidion laterale: Bocage (1866a:49, 1895a:82), Boulenger (1896:616), Ferreira (1903:10), Monard (1937b:111), Broadley (1992b:35, 1996b:11), Chippaux (2006:77), Wallach et al. (2014:401).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from central-west Africa, from Côte d’Ivoire and possibly Senegal to western Uganda and south to the Democratic Republic of Congo and northern Angola.

Occurrences in Angola (Map 297): The species is known only from two records in northwestern Angola, including the Cabinda enclave. **Cabinda:** “Molembo” [-5.33333, 12.20000] (Bocage 1866a:49, 1895a:82; Broadley 1996b:11). **Kwanza Norte:** “N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1903:10; Monard 1937b:113; Broadley 1996b:11).

Taxonomic and distributional notes: None.



MAP 397. Distribution of *Lycophidion laterale* in Angola.

Lycophidion meleagris Boulenger, 1893

SPECKLED WOLF SNAKE

Lycophidion meleagris Boulenger 1893:337, pl. 21, figs. 2, 2a–2b. Lectotype: BMNH 1946.1.14.40 (formerly BMNH 43.14.8.? *vide* BMNH register) (collector unknown) designated by Broadley (1996b:9). Type locality: “Ambrizette” and “Ambriz” [= N’Zeto and Ambriz], northwestern Angola, restricted by neotype designation to “Ambrizette” [= N’Zeto], Zaire Province, Angola.

Lycophidion meleagris: Bocage (1895a:82), Ferreira (1904:115), Boulenger (1915:202), Monard (1937b:111), Hellmich (1957b:62), Loveridge (1957:252), Frade (1963:252).

Lycophidion meleagre: Broadley (1992b:33, 1996b:11), Broadley (1996b:11), Spawls et al. (2004:325), Wallach et al. (2014:402).

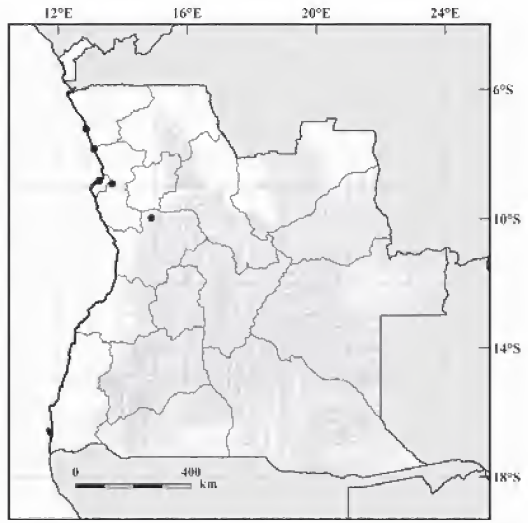
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species has an apparently disjunct distribution, with published records from northwestern Angola, southeastern Democratic Republic of Congo, southeastern Kenya and northeastern Tanzania.

Occurrences in Angola (Map 298): The species is restricted to northwest Angola, including

the Cabinda enclave. **Cabinda:** “Chinxasio” (Broadley 1996b:11) (probably Chinchoxo?). **Zaire:** “Ambrizette” [-7.23333, 12.86667] (Boulenger 1893:337, 1915:202; Bocage 1895a:82; Monard 1937b:113; Loveridge 1957:252; Broadley 1996b:11). **Luanda:** “Luanda” [-8.83333, 13.26667] (Broadley 1996b:11). **Bengo:** “Ambriz” [-7.844312, 13.106493] (Boulenger 1893:337, 1915:202; Bocage 1895a:82; Monard 1937b:113; Loveridge 1957:252; Broadley 1996b:11); “Cabiri” [-8.91667, 13.66667] (Ferreira 1904:115; Broadley 1996b:11). **Kwanza Sul:** “Libolo/Luati” [-9.98333, 14.90000] (Hellmich 1957b:62; Broadley 1996b:11).

Taxonomic and distributional notes: The wide and disjunct distribution of this species calls for further taxonomic investigation.



MAP 298. Distribution of *Lycophidion mealegre* in Angola.

Lycophidion multimaculatum Boettger, 1888

SPOTTED WOLF SNAKE

Lycophidion Capense mut. *multimaculata* Boettger 1888:67. Lectotype: SMF 17973 (formerly SMF 7340, a) (collector P. Hesse) designated by Mertens (1922:179). Type locality: “bei Povo Nemlao ... bei Povo Netonna, nächst Banana,” restricted by lectotype designation to “Banana, Unterer Kongo” [= Banana, lower Congo], Bas-Congo Province, Democratic Republic of Congo.

Lycophidion Horstockii: Bocage (1866a:49, 1870:68).

Lycophidion capense: Peters (1877a:615, 1881:149), Bocage (1895a:81, 1896a:112), Ferreira (1904:115, 1906:167), Boulenger (1893:616, 1905:112), Monard (1937b:117).

Lycophidion semiannulus: Ferreira (1897b:243), Monard (1937b:113).

Lycophidion capense capense: Schmidt (1933:13), Bogert (1940:30), Hellmich (1957a:61, 1957b:71).

Lycophidion capense multimaculatum: Broadley (1990:94, 1991b:214), Laurent (1964a:94, 1968:474).

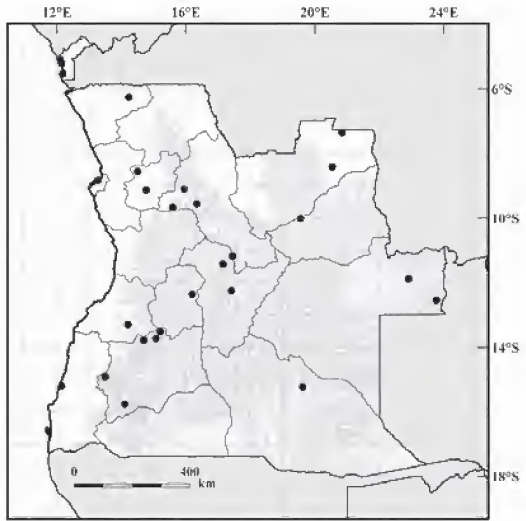
Lycophidion multimaculatum: Branch and McCartney (1992:1), Broadley (1992b:36, 1996b:19), Branch (1998:77), Broadley and Cotterill (2004:48), Chippaux (2006:79), Chirio and LeBreton (2007:470), Wallach et al. (2014:402).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Cameroon and Central African Republic to Tanzania, southwest to Democratic Republic of Congo, southern Angola and adjacent Zambia, and the Caprivi Strip in Namibia.

Occurrences in Angola (Map 288): The records are mostly from eastern Angola. However, the species distribution may comprise the entire country including Cabinda Province, with exception of the desert regions of the far southwestern Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615; Broadley 1996b:19); “Landana” [-5.21667, 12.15000] (Broadley 1996b:19); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:49, 1895a:81; Broadley 1996b:19). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:81). **Luanda:** “Luanda” [-8.83333, 13.26667] (Broadley 1996b:19). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:49, 1895a:81; Boulenger 1893:616; Broadley 1996b:19); “Malanje” [-9.55000, 16.35000] (Bocage 1866a:149, 1895a:81); “Pungo-Adongo” [-9.66667, 15.58333] (Broadley 1996b:19). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:95,

1968:474); “Calonda” [-8.41667, 20.53333] (Laurent 1964a:94; 1968:474); “Lunda District” (Broadley 1996b:19). **Lunda Sul:** “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:95; 1968:474). **Moxico:** “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:95; 1968:474); “Macondo, Haut Zambèze” [-12.55000, 23.76667] (Laurent 1964a:95; 1968:474). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Ferreira 1906:167; Broadley 1996b:19); “Golungo Alto” [-9.13333, 14.76667] (Ferreira 1906:167). **Bié:** “32 km E of Dande, Gauca” [-11.18333, 17.45000] (Schmidt 1933:13; Broadley 1996b:19); “Chitau” [-11.43333, 17.15000] (Schmidt 1933:13; Laurent 1968:474; Broadley 1996b:19). **Huambo:** “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:61; Broadley 1996b:19); “Galanga” [-13.73333, 15.06667] (Bocage 1895a:81; Laurent 1968:474). **Benguela:** “Entre-Rios” [-12.26667, 17.41667] (Hellmich 1957a:61, 71; Broadley 1996b:19); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:112). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:81; Boulenger 1893:616; Laurent 1968:474; Broadley 1996b:19); “Rio Cuce” [-13.51667, 15.20000] (Ferreira 1897b:243; Monard 1937b:113); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:117); “Gambos” [-15.76667, 14.10000] (Broadley 1996b:19); “28 km N of Sá da Bandeira” [-14.91667, 13.499914] (Broadley 1996b:19). **Namibe:** “Mossamedes” [-15.20000, 12.15000] (Bocage 1895a:81; Laurent 1968:474; Broadley 1996b:19). **Quando Cubango:** “approximately 50 km E of Cuito Cuanavale” [-15.23333, 19.61667] (Branch and McCartney 1992:1; Broadley 1996b:19). **Undetermined Locality:** “Between Benguela and Bihé” (Boulenger 1905:112; Broadley 1996b:19).



MAP 299. Distribution of *Lycophidion multimaculatum* in Angola.

Taxonomic and distributional notes: The majority of the specimens originally assigned to *Lycophidion capense* Smith, 1831, in Angola (Peters 1877a, 1881, Bocage 1895a, 1896a; Ferreira 1904, 1906; Boulenger 1893, 1905, Schmidt 1933; Monard 1937b:117; Bogert 1940; Hellmich 1957a, 1957b) refer to *Lycophidion multimaculatum* Boettger, 1888. Modern authors (e.g., Broadley 1996b; Branch 1998) have typically followed Broadley (1992b) in recognizing *L. multimaculatum* as a full species. Given that the currently understood species boundary between this species and *L. capense* is suspiciously consistent with political boundaries, further investigation of populations of wolf snakes in and adjacent to the Caprivi Strip in northeastern Namibia is required.

Lycophidion ornatum Parker, 1936

ORNATE WOLF SNAKE

Lycophidion ornatum Parker 1936:122. Holotype: BMNH 1946.1.14.28 (formerly BMNH 1936.8.1.690) (collector K. Jordan). Type locality: “Congulu” [= Congulo], Kwanza Sul Province, Angola.

Lycophidion capense ornatum: Loveridge (1957:252).

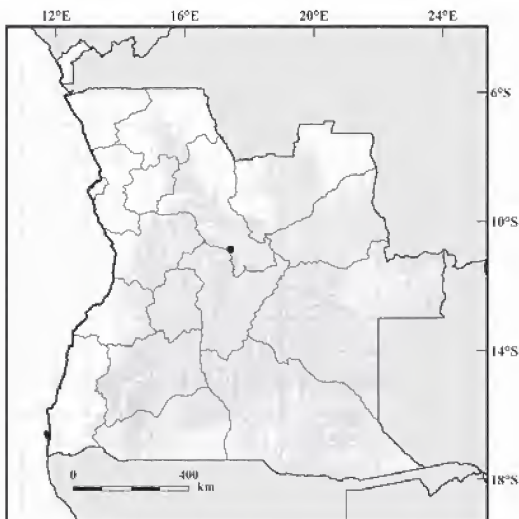
Lycophidion ornatum: Laurent (1968:470), Broadley (1992b:35, 1996b:16), Spawls et al. (2004:325), Broadley and Hughes (1993:12), Chippaux (2006:80), Chirio and LeBreton (2007:474), Wallach et al. (2014:411).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Nigeria to South Sudan and Kenya, south to Tanzania and west to the Democratic Republic of Congo and Angola.

Occurrences in Angola (Map 300): The species is only known from the type locality “Congulu” in Kwanza Sul Province, however, its distribution may comprise all northern regions of the country. **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:122; Loveridge 1957:252; Laurent 1968:470; Broadley and Hughes 1993:12; Broadley 1996b:16; Chippaux 2006:80; Wallach et al. 2014:411).

Taxonomic and distributional notes: Loveridge (1957) treated *L. ornatum* as a subspecies of *Lycophidion capense* (Smith, 1831), but it was later elevated to specific status again by Laurent (1968).



MAP 300. Distribution of *Lycophidion ornatum* in Angola.

Genus *Mehelya* Csiki, 1903

Mehelya poensis (Smith, 1847)

WESTERN FOREST FILE SNAKE

Heterolepis poensis Smith 1847a: page 2 of 2 unnumbered pages accompanying plate 55 [*Heterolepis capensis*]. Holotype, BMNH 1946.1.14.20 (formerly BMNH 47.4.4.? *vide* BMNH register) (collectors T. Vogel and J. Ansel [Niger Expedition]). Type locality: “Fernando Po” [= Bioko], Gulf of Guinea, Equatorial Guinea.

Heterolepis bicarinatus: Bocage (1866a:49).

Heterolepis poensis: Ferreira (1906:168).

Simocephalus poensis: Monard (1937b:111).

Mehelya poënsis: Hellmich (1957b:61).

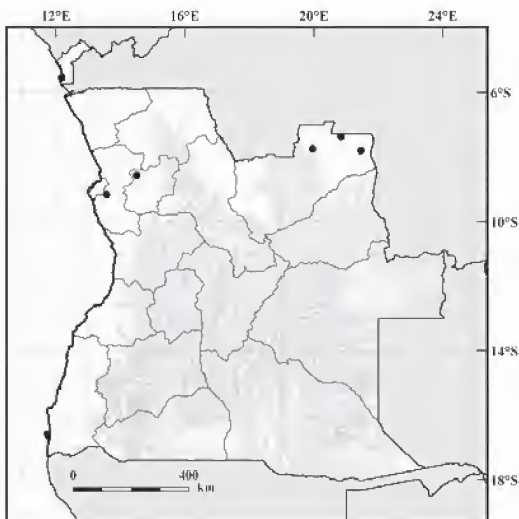
Mehelya poensis: Loveridge (1939:145, 1957:253), Laurent (1950a:8), Thys van den Audenaerde (1966:32), Spawls et al. (2004:332), Broadley and Cotterill (2004:48), Chippaux (2006:84), Chirio and LeBreton (2007:482), Broadley et al. (2018:6).

Gonionotophis poensis: Kelly et al. (2011:425), Branch and Conradie (2015:200), Wallach et al. (2014:426).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Guinea-Bissau east to South Sudan and south to the southern Democratic Republic of Congo and northern Angola.

Occurrences in Angola (Map 301): The species occurs in northern regions of Angola, including the Cabinda enclave. **Cabinda:**



MAP 301. Distribution of *Mehelya poensis* in Angola.

“Cabinda” [-5.55000, 12.18333] (Loveridge 1939:146). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Thys van den Audenaerde 1966:32); “Carumbo” [-7.75294, 19.95672] (Branch and Conradie 2015:200); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:8). **Bengo:** “Cabinda (Cazengo)” [-9.16667, 13.56667] (Ferreira 1906:168; Monard 1937b:113, Loveridge 1939:146). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:61).

Taxonomic and distributional notes: Broadley et al. (2018) recently used molecular and morphological data to revise the African file snakes, splitting the genus *Gonionotophis* and resurrecting *Mehelya*, with *poensis* as its type species.

Genus *Polemon* Jan, 1858

Polemon collaris (Peters, 1881)

COLLARED SNAKE-EATER

Microsoma collare Peters 1881:148. Holotype: ZMB 10045 (collector F.W.A. von Mechow). Type locality: “Cuango,” “Macange” [= Malanje] Malanje Province, Angola.

Microsoma collare: Bocage (1887a:182, 1895a:124), Boulenger (1896:251).

Miodon collaris: Boulenger (1905:114, 1915:215), Ferreira (1906:169), de Witte and Laurent (1947:70).

Miodon gabonensis: Hellmich (1957a:72, 1957b:63).

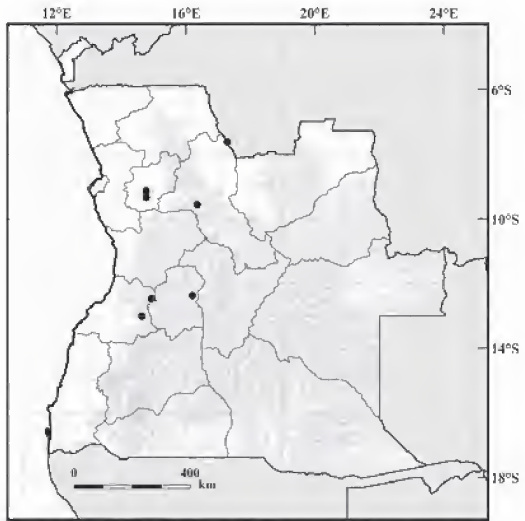
Polemon collaris: Chippaux (2006:207), Wallach et al. (2014:561).

Polemon collaris collaris: Chirio and LeBreton (2007:644).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Nigeria to Uganda and south to Angola.

Occurrences in Angola (Map 302): The species occurs in western Angola. **Malanje:** “Macange” [-9.55000, 16.35000] (Peters 1881:148; de Witte and Laurent 1947:70; Hellmich 1957a:72; Chippaux 2006:207; Chirio and LeBreton 2007:644; Wallach et al. 2014:561). **Kwanza Norte:** “Golungo Alto” [-9.13333, 14.76667] (Boulenger 1905:114; Ferreira 1906:169; de Witte and Laurent 1947:70; Hellmich 1957a:72); “Cazengo” [-9.33333, 14.76667] (Bocage 1887a:182, 1895a:124; de Witte and Laurent 1947:70; Hellmich 1957a:72). **Huambo:** “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:53). **Benguela:** “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:124; de Witte and Laurent 1947:70; Hellmich 1957a:72); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:72). **Undetermined Locality:** “Cuango” (Peters 1881:148; de Witte and Laurent 1947:70; Chippaux 2006:207; Chirio and LeBreton 2007:644; Wallach et al. 2014:561) — Malanje Province, near the Francisco José Waterfalls and the border with the Democratic Republic of Congo [-7.61789, 17.27817].



MAP 302. Distribution of *Polemon collaris* in Angola.

Taxonomic and distributional notes: Peters (1881) mentioned both “Cuango” and “Macange” [= Malanje] in the original description. Von Mechow collected along the Cuango River in Malanje Province, specifically near the Francisco José Waterfalls. Because the Cuango extends into other provinces and because there are also villages with this name, the origin of Peters’ type of *Microsoma collare* has sometimes been confused.

Genus *Prosymna* Gray, 1849***Prosymna ambigua* Bocage, 1873****EAST AFRICAN SHOVEL-SNOOT**

Prosymna ambiguus Bocage 1873b:218. Holotype: MBL 610 (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: “Duque de Bragança” [= Calandula], Malanje Province, Angola.

Prosymna ambigua brevis Laurent 1954a:50, figs. 12–14. Holotype: MD 2177 (collector A. Barros Machado), lost (see Notes below). Type locality: “Dundo,” Lunda Norte Province, Angola.

Prosymna meleagris: Bocage (1866a:47).

Prosymna ambigua: Boulenger (1893:248, 1915:208), Bocage (1895a:99), Loveridge (1933:244), Monard (1937b:114), Wallach et al. (2014:568), Ceriaco et al. (2016b:83).

Prosymna bocagii: Boulenger (1915:208).

Prosymna ambigua brevis: Laurent (1964a:108), Thys van den Audenaerde (1933:34), Loveridge (1958:157).

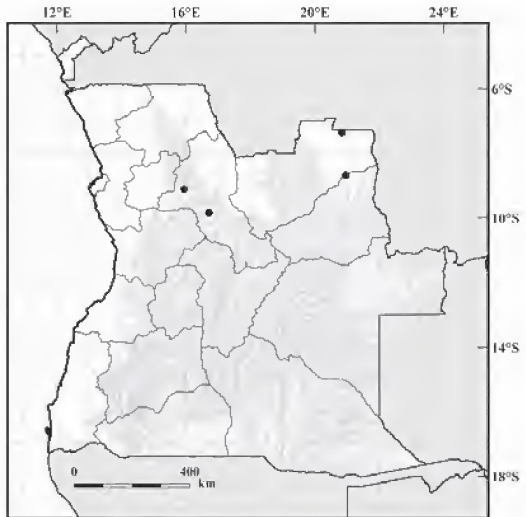
Prosymna ambigua ambigua: Laurent (1950a:9, 1954a:52), Loveridge (1958:151), Broadley (1980:534), Chippaux (2006:142).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from central Cameroon, Gabon and southern Congo, east through the southern half of Democratic Republic of Congo, northern Angola and Zambia to South Sudan, southwestern Kenya and Uganda and south to Malawi and Zimbabwe.

Ocurrences in Angola (Map 303): The species occurs in the northern regions of the country. **Lunda Norte:** “Dundo” [−7.36667, 20.83333] (Laurent 1950:9, 1954a:50, 1964a:108; Loveridge 1958:158; Thys van den Audenaerde 1966:34; Broadley 1980:538); “Sombo” [−8.68333, 20.95000] (Laurent 1954:50; Loveridge 1958:158; Broadley 1980:538). **Malanje:** “Duque de Bragança” [−9.10000, 15.95000] (Bocage 1866a:47, 1873a:218, 1895a:99; Loveridge 1933:244, 1958:151–154; Monard 1937b:114; Broadley 1980:538; Chippaux 2006:142; Wallach et al. 2014:568); “Cangandala National Park” [−9.84606, 16.72233] (Ceriaco et al. 2016b:83).

Taxonomic and distributional notes: Broadley (1980) synonymized the subspecies *P. a. brevis* Laurent, 1954 with the typical form. In January 2017 the holotype of *P. a. brevis* could not be located in the Museu Dundo.



MAP 303. Distribution of *Prosymna ambigua* in Angola.

Prosymna angolensis* Boulenger, 1915*ANGOLA SHOVEL-SNOOT**

Prosymna angolensis Boulenger 1915:208. Syntypes: MBL specimen numbers unknown, lost *vide* Broadley (1980). Neotype: NHMW 19275:2 designated by Broadley (1980:497). Type locality: Angola by implication (Boulenger 1915:208), restricted to “Huila” by Loveridge (1958:149), changed to “Caconda” by subsequent designation of a neotype Broadley (1980:497, 513).

Prosymna frontalis: Bocage (1873b:218, 1895a:98, pl. 11, fig. 2), Boulenger (1893:248, 1896:641).

Prosymna ambigua: Monard (1931:104, 1937b:123).

Prosymna angolensis: Monard (1937b:114, 122), Loveridge (1958:149), Bogert (1940:59), Hellmich (1957b:66), FitzSimons (1962:161), Broadley (1980:512, 1990:227), Branch (1998:84), Broadley et al. (2003:187), Wallach et al. (2014:568).

Prosymna ambigua ambigua: Mertens (1938a:439), Loveridge (1958:151).

Global conservation status (IUCN):

Least Concern.

Global distribution: The species is known from southern Angola, northern Namibia including the Caprivi Strip, Zambia west of the Zambezi, northern Botswana, and western Zimbabwe.

Ocurrences in Angola (Map 304): The species occurs in the southwestern Angola, extending northwards along the coast to Luanda.

Luanda: “Luanda” [-8.83333, 13.26667] (Broadley 1980:515). **Huambo:** “Bela-Vista” (Missao di Dondi) [-12.36667, 16.20000] (Hellmich 1957b:66; Loveridge 1958:154; Broadley 1980:515, 1990:229). **Benguela:**

“Quibula” [-12.28333, 14.68333] (Bocage 1895a:98); “Quissange” [-12.43333, 14.05000] (Bocage 1895a:98; Loveridge 1958:151); “Quindumbo” [-12.46667, 14.93333] (Bocage

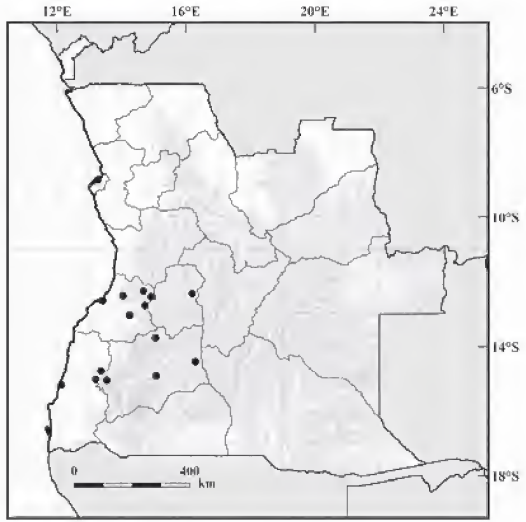
1895a:98; Loveridge 1958:151); “Benguella” [-12.58333, 13.41667] (Bocage 1895a:98); “Eban-ga” [-12.73333, 14.73333] (Monard 1937b:122; Loveridge 1958:151; Broadley 1980:515); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:439; Loveridge 1958:151; Broadley 1980:515).

Huíla: “Capelongo” [-14.91667, 15.08333] (Bogert 1940:59; Loveridge 1958:153-154; Broadley 1980:515); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:98; Loveridge 1958:151; Broadley 1980:515, 1990:227, 229); “Vila-da-Ponte” [-14.46667, 16.30000] (Monard 1937b:123; Loveridge 1958:154; Broadley 1980:515); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:98; Loveridge 1958:149; FitzSimons 1962:161). **Namibe:** “Biballa” [-14.76667, 13.36667] (Bocage 1873a:218, 1895a:98; Loveridge 1958:151); “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:98; Loveridge 1958:151; Broadley 1980:515); “Mossamedes” [-15.20000, 12.15000] (Bocage 1973b:218, 1895a:99; Boulenger 1893:248; Loveridge 1958:151; Broadley 1980:515). **Undetermined Local-ity:** “no locality” (Broadley 1980:515).

Taxonomic and distributional notes: Boulenger (1915) applied the new name *Prosymna angolensis* to a series of Angolan snakes listed under the name *Prosymna frontalis* (Peters, 1867) by Bocage (1873b, 1895a). Boulenger did not nominate any type locality other than Angola but Loveridge (1958) subsequently restricted the type locality to “Huíla.” Broadley (1980) reviewed the species. He had visited the Museu Bocage collection in Lisbon in 1968 and did not find any specimens from Bocage’s series from “Huíla”, but did locate four individuals from “Caconda.” Although these specimens had been destroyed before Broadley’s (1980) review, he restricted the type locality to “Caconda,” by designating a neotype from this locality in the Naturhistorisches Museum Wien. Angolan records from “Vila-da-Ponte” (Monard 1931, 1937b), “Cubal” (Mertens 1938a), and “Capelongo” (Loveridge 1958) previously identified as belonging to *Prosymna ambigua* (Bocage, 1873) are probably misidentifications and should be assigned to *P. angolensis*.

Prosymna frontalis (Peters, 1867)

Temnorhynchus frontalis Peters 1867a:236, pl. Lecotype: ZMB 5763a (collector C.H. Hahn), designated by Mertens (1955:94). Type locality: “Otjimbingue in Südwestafrika” [= Otjimbingwe, Erongo Region], Namibia.



MAP 304. Distribution of *Prosymna angolensis* in Angola.

SOUTH-WESTERN AFRICAN SHOVEL-SNOOT

Temnorhynchus frontalis Peters 1867a:236, pl. Lecotype: ZMB 5763a (collector C.H. Hahn), designated by Mertens (1955:94). Type locality: “Otjimbingue in Südwestafrika” [= Otjimbingwe, Erongo Region], Namibia.

Prosymna frontalis: Broadley (1980:517, 1990:229), Branch (1998:85), Bates et al. (2014:389), Wallach et al. (2014:569).

Global conservation status (IUCN):

Least Concern.

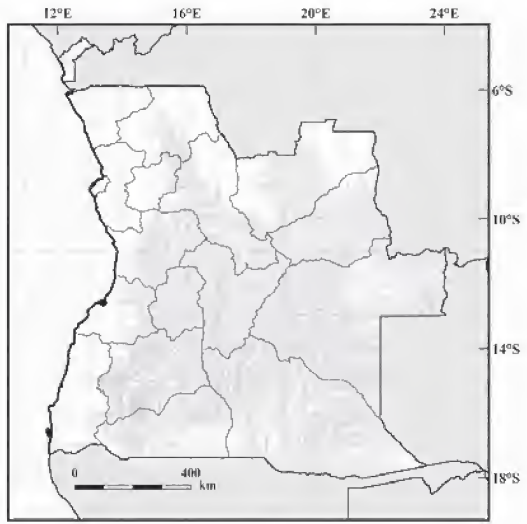
Global distribution: The species is known from southwestern Angola to Namibia, southwards to the Northern Cape, South Africa.

Ocurrences in Angola (Map 305): The species occurs in southwestern Angola.

Benguela: “Benguela” [-12.58333, 13.41667] (Broadley 1980:519).

Taxonomic and distributional notes:

This species was recorded for Angola by Bocage (1873a, 1895a) and Boulenger (1893, 1896), but these records likely represent *Prosymna angolensis* Boulenger, 1893 (see *P. angolensis* account). Broadley (1980) cited one specimen from “Benguela” deposited in the Transvaal Museum, now Ditsong National Museum of Natural History, Pretoria, South Africa.



MAP 305. Distribution of *Prosymna frontalis* in Angola.

***Prosymna visseri* FitzSimons, 1959**

VISSER'S SHOVEL-SNOOT

Prosymna visseri FitzSimons 1959:408. Holotype: TM 24531 (collector C. Koch). Type locality: “near Caracul, S. Angola” (FitzSimons, 1959:408) [= near Caraculo], Namibe Province, Angola.

Prosymna visseri: Broadley (1980:543), Branch (1998:85), Bauer et al. (2001:76), Branch (1998:85), Wallach et al. (2014:571).

Global conservation status (IUCN): Not Evaluated.

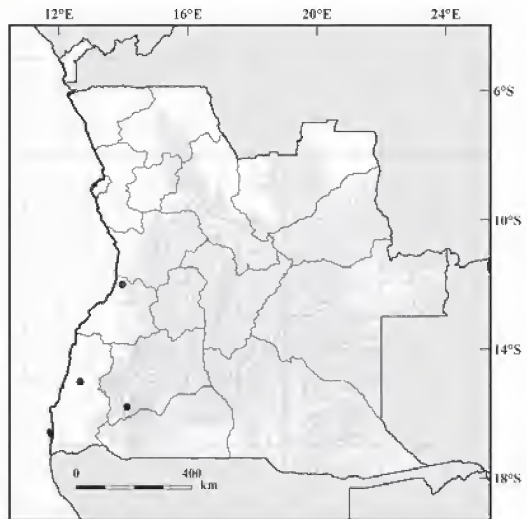
Global distribution: The species is known from southwestern Angola and northern Namibia.

Ocurrences in Angola (Map 306): The species' distribution range comprises Benguela and Namibe Provinces as well the adjacent areas of Huíla and Cunene Provinces.

Benguela: “20 km S of Balabaia” [-12.01667, 13.96667] (Broadley 1980:544). **Huíla:** “5 km S of Chibemba” [-15.785418, 14.106551] (Broadley 1980:544). **Namibe:** “near Caracul, S. Angola” [-15.01667, 12.66667] (FitzSimons 1959:408; Broadley 1980:544; Bauer et al. 2001:76; Wallach et al. 2014:571).

Taxonomic and distributional notes:

This species was previously considered an Angolan endemic (e.g., Broadley 1980) but it has since been found at numerous localities in arid to semi-arid northwestern Namibia.



MAP 306. Distribution of *Prosymna visseri* in Angola.

Genus *Psammophis* Boie, 1825

Psammophis angolensis (Bocage, 1872)

DWARF SAND SNAKE

Amphiophis angolensis Bocage 1872:82. Holotype: MBL 1822 (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: “Dondo dans l’intérieur d’Angola” [= Dondo], Kwanza Norte, Angola.

Ablabes Homeyeri Peters (1877a:620). Holotype: ZMB 9209 (collector A. von Homeyer). Type locality: “Pungo Andongo,” Malanje Province, Angola.

Amphiophis angolensis: Bocage (1895a:113, 1897a:201).

Psammophis angolensis: Boulenger (1896:170), Boettger (1898:104); Boulenger (1915:213); Schmidt (1933:14), Loveridge (1933:252, 1940:68, 1957:280), Laurent (1950a:9, 1954a:59, 1964a:114), FitzSimons (1962:235), Frade (1963:253), Auerbach (1987:171), Brandstätter (1996:40), Broadley (1962a:834, 1977b:26, 1990:148, 2002a:98), Broadley and Cotterill (2004:50), Spwals et al. (2004:403), Kelly et al. (2008:1053), Bates et al. (2014:374), Wallach et al. (2014:575).

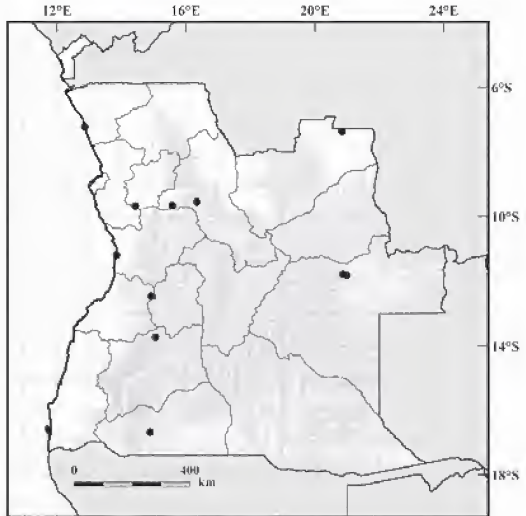
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widespread in sub-Saharan Africa, from Ethiopia and Tanzania, through the Democratic Republic of Congo, through Zambia, Malawi, Mozambique, westwards to Angola and southwards through northern Namibia, Botswana, and Zimbabwe to northeastern South Africa (Limpopo and Mpumalanga provinces).

Ocurrences in Angola (Map 307): The species occurs in the entire country with exception of the Namibe Province and the Cabinda enclave. **Zaire:** “Ambrizette” [-7.23333, 12.86667] (Bocage 1895a:113, 1897a:201; Boettger 1898:104; Loveridge 1940:68). **Kwanza Norte:** “Dondo” [-9.68333, 14.43333] (Bocage 1872:82, 1895a:113, 1897a:201; Loveridge 1933:252, 1940:68, 1957:280; FitzSimons 1962:235; Auerbach 1987:171, Broadley 1962a:834, 1977b:26, 1990:148, 2002a:118; Wallach et al. 2014:575). **Malanje:** “Malanje” [-9.55000, 16.35000] (Peters 1881:149; Bocage 1895a:113, 1897a:201; Loveridge 1940:68); “Pungo-Andongo” [-9.66667, 15.58333] (Peters 1877a:620; Bocage 1895a:113, 1897a:201; Loveridge 1940:68, 1957:280; Broadley 1977b:26, 2002a:118). **Lunda Norte:**

“Dundo” [-7.36667, 20.83333] (Bocage 1895a:113; Laurent 1950a:9, 1954a:59, 1964a:114; Loveridge 1957:280). **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:114); “Réserve de chasse de Cameia” [-11.83333, 21.00000] (Laurent 1964a:114). **Kwanza Sul:** “Novo Redondo” [-11.20000, 13.85000] (Bocage 1895a:113; Loveridge 1940:68). **Benguela:** “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:113, 1897a:201; Loveridge 1940:68). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:113, 1897a:201; Loveridge 1940:68). **Cunene:** “Humbe” [-16.68333, 14.90000] (Bocage 1895a:113, 1897a:201; Schmidt 1933:14; Loveridge 1940:68).

Taxonomic and distributional notes: The type locality, Dondo, has been variously misidentified as “Danda, Loanda Distr.” (Loveridge 1940, Broadley 1962a) “Donda, Loanda Distr.” (Auerbach 1987), “Donda i.e. Dundo, Loanda distr.” (FitzSimons 1962a; Broadley 1990) or even



MAP 307 Distribution of *Psammophis angolensis* in Angola.

“Dondo, Luanda” (Crawford-Cabral and Mesquitela 1989). *Psammophis angolensis* is a widespread species with several peculiar autapomorphies. It was originally described in the genus *Amphiophis* Bocage, 1872, and Brandstätter (1995) suggested that this should be revived as a monotypic subgenus. However, Kelly et al. (2008) did not follow this suggestion in their phylogenetic analysis of *Psammophis*.

***Psammophis ansorgii* Boulenger, 1905**

LINK-MARKED SAND RACER (Endemic)

Psammophis Ansorgii Boulenger 1905:113, pl. 4, fig. 4. Holotype: BMNH 1946.1.8.49 (formerly BMNH 1905.5.29.31) (collector W.J. Ansorge). Type locality: “between Benguella and Bihé,” Angola.

Psammophis jallae: Loveridge (1940:62).

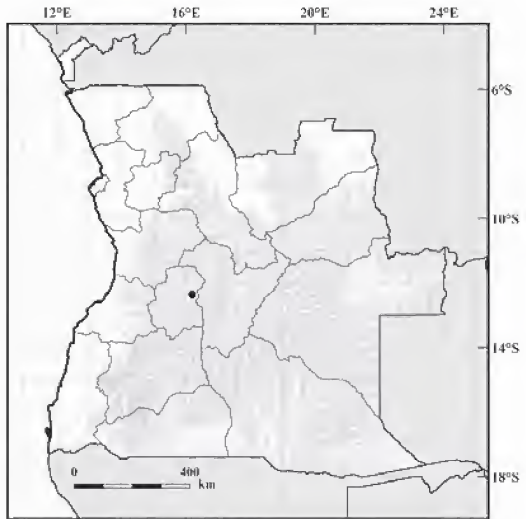
Psammophis ansorgii: Hellmich (1957b:69), Broadley (1977b:26, 2002a:98), Brandstätter (1996:42), Wallach et al. (2014:576).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola.

Occurrences in Angola (Map 308): The species is endemic to the central highlands of Angola. **Huambo:** “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:69). **Undetermined locality:** “Between Benguella to Bihé” (Boulenger 1905:113; Loveridge 1940:62; Broadley 1977b:26, 2002a:98; Wallach et al. 2014:576).

Taxonomic and distributional notes: Loveridge (1940) placed *Psammophis ansorgii* in the synonymy of *Psammophis jallae* Peracca, 1896, but Broadley (1977b) considered it a full species, as have subsequent authors.



MAP 308. Distribution of *Psammophis ansorgii* in Angola.

***Psammophis jallae* Peracca, 1896**

JALLA'S SAND SNAKE

Psammophis jallae Peracca 1896:2, 2 figs. Syntypes: MZUT 1633 and 1871 (formerly MZUT 1823a-b) (collector L. Jalla). Type locality: “Strada da Kazungula a Buluwaio” (Peracca 1896:2), [= road from Kazungula, Zambia to Bulawayo], Zimbabwe.

Psammophis Rohani Angel (1922:116). Type: MNHP 20-198 (collector J. F. de Rohan-Chabot). Type locality: “Région de la rivière Lumuna, affluent de Loengoué” [= Lumuna River, tributary of the Luina and Quando Rivers], Angola.

Psammophis rohani: Angel (1923:166), Monard (1937b:128).

Psammophis jallae: Loveridge (1940:62), FitzSimons (1962:237), Brandstätter (1996:65), Broadley (1977b:12, 1990:138, 2002a:93), Branch (1998:90), Bates et al. (2014:376), Wallach et al. (2014:576).

Global conservation status (IUCN): Not Evaluated.

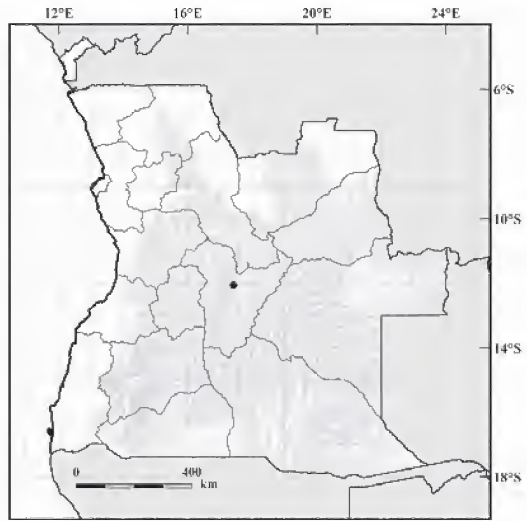
Global distribution: The species is known from central and southeastern Angola, western Zambia, northeastern Namibia, Botswana, western and central Zimbabwe and Limpopo Province of South Africa. Also from the southern portion of the former Katanga Province, Democratic Republic of Congo (*fide* Wallach et al. 2014).

Occurrences in Angola (Map 309): The species occurs in central and southeastern Angola. **Bié:** “Bigondo” [-12.06667, 17.41667] (Loveridge 1940:64); “Benguella to Bihé” (Loveridge

1940:64). **Cuando Cubango:** “Lumuna regions, Loengoué affluent” (Angel 1921:118; 1923:168; Monard 1937b:128; Loveridge 1940:62; Broadley 1977b:12, 2002a:93).

Taxonomic and distributional notes:

Angel (1923) provided three views of the head (figs. 10–12) of the species he described the year previously. The date of description has been given as 1921, but Angel (1923) explicitly stated that the associated issue of the Bulletin de la Société Zoologique de France had appeared only in March 1922. *Psammophis rohani* was synonymized with *P. jallae* Perraca, 1896 by Loveridge (1940).



MAP 309. Distribution of *Psammophis jallae* in Angola.

***Psammophis leopardinus* (Bocage, 1887)**

LEOPARD SAND SNAKE

Psammophis sibilans var. *leopardinus* Bocage 1887a:206. Lectotype: MBL 1798 (collector J.A. d'Anchieta), designated by Broadley (1977b:18), destroyed by fire 18 March 1978. Type locality: “Catumbella” (Bocage 1887b:206) [= Catumbela] Benguela Province, Angola.

Psammophis sibilans var. *C. leopardina*: Bocage (1895a:117).

Psammophis sibilans var. *E. brevirostris*: Bocage (1895a:118).

Psammophis brevirostris: Boulenger (1915:213); Monard (1937b:133), Themido (1941:10).

Psammophis brevirostris brevirostris: Brandstätter (1996:45).

Psammophis sibilans sibilans: Loveridge (1957:279).

Psammophis sibilans leopardinus: Broadley (1977b:18).

Psammophis brevirostris leopardinus: Brandstätter (1996:48), Branch (1998:91).

Psammophis leopardinus: Broadley (1990:143, 2002a:95), Kelly et al. (2008:1048), Hughes and Wade (2002:75), Bates et al. (2014:374), Wallach et al. (2014:577).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from dry savanna and semi-desert regions in southwestern Angola and central and northern Namibia.

Ocurrences in Angola (Map 310): This species occurs chiefly in southwestern Angola.

Luanda: “Luanda” [-8.83333, 13.26667] (Broadley 2002:111; Hughes and Wade 2002:77).

Huambo: “Bella Vista (Missao di Dondi)” [-12.36667, 16.20000] (Broadley 2002:111; Hughes and Wade 2002:77); “Huambo” [-12.76667, 15.73333] (Themido 1941:10).

Benguela: “Lobito bay” [-12.35000, 13.55000] (Broadley 1977b:19, 2002a:111; Hughes and Wade 2002:77); “Catumbella” [-12.43333, 13.55000] (Bocage 1895a:117; Loveridge 1957:279; Broadley 1990:143, 2002a:111; Hughes and Wade 2002:77); “Quissange” [-12.43333, 14.05000] (Bocage 1895a:117);

“Catengue” [-13.03333, 13.73333] (Broadley 2002:111; Hughes and Wade 2002:77).

Huíla: “Caconda” [-13.73333, 15.06667] (Broadley 2002:111; Hughes and Wade 2002:77); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:133; Broadley 2002:111);

“Quillengues” [-14.06667, 15.08333] (Bocage 1895a:114); “Vila da Ponte” [-14.46667, 16.30000] (Monard 1937b:133; Broadley 2002:111);

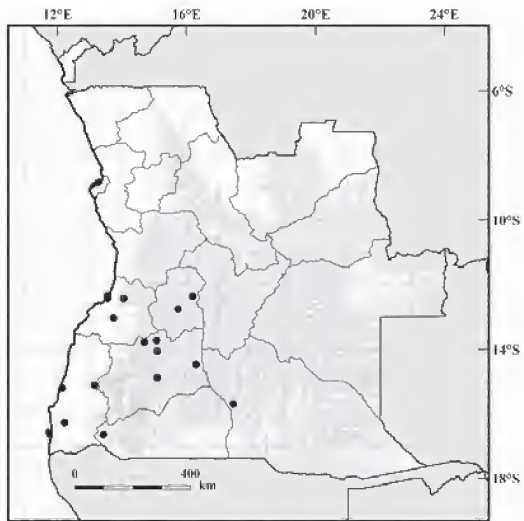
“Capelongo” [-14.88333, 15.08333] (Hughes and Wade 2002:77).

Namibe: “Capangombe” [-15.10000, 13.15000] (Bocage 1887b:206; Broadley 2002:111);

“Mossamedes”

[-15.20000, 12.15000] (Bocage 1887b:206, 1895a:114; Loveridge 1957:279); “Iona” [-16.28106, 12.22291] (Broadley 2002:111; Hughes and Wade 2002:77). **Cunene:** “Oncocua, 37 km NE on way to Otchinza” [-16.65606, 13.42370] (Broadley 2002:111; Hughes and Wade 2002:77). **Cuando Cubango:** “Kayundu” [-15.70000, 17.45000] (Monard 1937b:133). **Undetermined Locality:** “Cuanza” (Broadley 2002:111).

Taxonomic and distributional notes: In addition to his Catumbella specimen, Bocage (1887b) based his description on a second specimen from, “l’intérieur de Mossamedes” collected by Capello and Ivens. Brandstätter (1996) recognized *P. sibilans* as occurring no further south than the northern part of Tanzania and proposed the reinstatement of *P. brevirostris* Peters, 1881 as a full species, rather than a subspecies of *P. sibilans*, with *leopardinus* treated as a subspecies of it. Currently *P. leopardinus* is recognized as a valid species (Broadley 1977b, 2002a; Kelly et al. 2008; Branch 1998; Wallach et al. 2014). The record from “Calombe” has been assigned to *P. leopardinus* although the habitat does not correspond to the typical dry savanna and semi-desert regions where the species is commonly found.



MAP 310. Distribution of *Psammophis leopardinus* in Angola.

Psammophis mossambicus Peters, 1882

OLIVE WHIP SNAKE

Psammophis sibilans var. *mossambica* Peters 1882c:122. Lectotype: ZMB 2468A, designated by Broadley (2002:96). Type locality: “auf der Insel Mossambique und auf dem gegenüberliegenden Festlande, auf der Halbinsel Cabaçeira und Mesuril [...] auf den Querimba-Inseln [...] und in Boror” (collector W.C.H. Peters), restricted to “der Insel Mossambique” [= Mozambique Island] by lectotype designation.

Psammophis sibilans: Bocage (1866a:48, 1895a:114, 1896a:113), Peters (1877a:615), Ferreira (1904:116), Boulenger (1905:113, 1915:213), Schmidt (1933:14), Monard (1937b:131), Loveridge (1936a:38).

Psammophis elegans: Bocage (1867b:226).

Psammophis sibilans sibilans: Mertens (1938a:441), Bogert (1940:70), Loveridge (1940:30), Laurent (1964a:113), Hellmich (1957b:70), Manaças (1973:196).

Psammophis phillipsii: Broadley (1977b:24), Branch and McCartney (1992:2), Brandstätter (1996:55), Hughes (1999:64), Kelly et al. (2008).

Psammophis mossambicus: Branch (1998:92), Broadley (2002:96), Broadley et al. (2003:167), Broadley and Cotterill (2004:50), Kelly et al. (2008:1048), Wallach et al. (2014:577), Ceriaco et al. (2016b:87), Conradie et al. (2016:22).

Psammophis cf. *mossambicus*: Branch and Conradie (2015:200).

Global conservation status (IUCN): Not Evaluated.

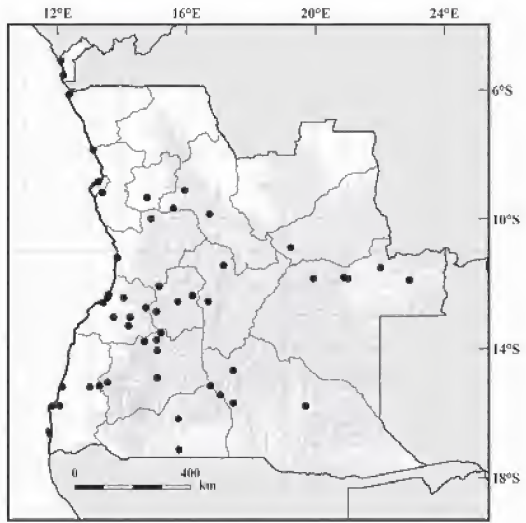
Global distribution: The species is known from South Sudan to South Africa, west through Swaziland in the east, in the west to northern Namibia (see Notes).

Occurrences in Angola (Map 311): The species occurs throughout the country, including the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615; Loveridge 1940:30); “Cabinda” [-5.55000, 12.18333] (Ferreira 1904:116; Loveridge 1940:30). **Zaire:** “San Antonio” [-6.13333, 12.36667] (Loveridge 1940:30). **Bengo:** “Ambriz” [-7.844312, 13.106493]

(Loveridge 1940:30; Broadley 2002:113).

Luanda: “Loanda” [-8.83333, 13.26667] (Bocage 1866a:48, 1895a:114; Loveridge 1940:30); “Loanda island” [-8.83333, 13.26667] (Loveridge 1940:30; Broadley 2002:113); “Quicamba Park” [-9.18333, 13.38333] (Broadley 2002:113). **Kwanza Norte:** “Cazengo” [-9.33333, 14.76667] (Ferreira 1904:116; Loveridge 1940:30). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Boulenger 1905:113; Loveridge 1940:30; Broadley 2002:113); “Pungo-Andongo” [-9.66667, 15.58333] (Boulenger 1905:113; Loveridge 1940:30; Broadley 2002:113); “Cangandala National Park” [-9.84606, 16.72233] (Ceríaco et al. 2016b:87); “Mulondo, Luanda Res., Malanje” (Broadley 2002:113). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:113).

Moxico: “Lago Dilolo” [-11.50000, 22.01667] (Manaças 1973:196); “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:113); “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1973:196); “réserve de chasse de Cameia” [-11.83333, 21.00000] (Laurent 1964a:113); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:113). **Kwanza Sul:** “Libolo/Luati” [-9.98333, 14.90000] (Hellmich 1957b:70); “Chingo” [-11.20000, 13.85000] (Ferreira 1904:116). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:14; Loveridge 1940:30; Broadley 2002:113); “Cubango basin (16b)” [-12.54222, 16.67694] (Conradie et al. 2016:8,9, 22). **Huambo:** “Galanga” [-12.06667, 15.15000] (Bocage 1895a:114; Loveridge 1940:30); “Bela-Vista (Sanguengue)” [-12.36667, 16.20000] (Hellmich 1957b:70); “Chipipa 13 km N, Hamubo” [-12.55000, 15.73333] (Broadley 2002:113); “Cuma” [-12.85889, 15.06722] (Loveridge 1936a:38, 1940:30; Broadley 2002:113). **Benguela:** “Lobito bay” [-12.33333, 13.58333] (Bogert 1940:79); “Catumbella” [-12.43333, 13.55000] (Loveridge 1940:30); “Quissange” [-12.43333, 14.05000] (Loveridge 1940:30); “Benguella” [-12.58333, 13.41667] (Bocage 1867b:226); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:131, Loveridge 1940:30); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:441; Loveridge 1940:30; Hellmich 1957b:70; Broadley 2002:113); “Katange” [-13.03333, 13.73333] (Loveridge 1940:30); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:113; Loveridge 1940:30; Broadley 2002:113); “Capaia to Cubal” (Broadley 2002:113). **Huilla:** “Rio Cuce” [-13.51667, 15.20000] (Bocage 1895a:114; Loveridge 1940:30); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:114; Loveridge 1940:30); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:131; Loveridge 1940:30); “Quillengues” [-14.06667, 15.08333] (Loveridge 1940:30); “Kuvangu” = “Vila-da-Ponte” [-14.46667, 16.30000] (Monard 1937b:131; Loveridge 1940:30); “Capelongo” [-14.91667, 15.08333] (Bogert 1940:70; Broadley 2002:113); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:114; Loveridge 1940:30); “Tchiuinguira, Huila” [-15.16667, 13.30000] (Broadley 2002:113); “Fazenda Bumbo, Humpata” [-15.20000, 13.00000] (Laurent 1964a:113); “Negola 6 km S, Huila” (Broadley 2002:113). **Namibe:** “Mossamedes” [-15.20000, 12.15000] (Loveridge 1940:30; Broadley 2002:113); “Rio Coroca” [-15.78333, 12.06667] (Bocage 1895a:114); “Port Alexander” [-15.80000, 11.83333] (Loveridge 1940:30). **Cunene:** “fl. Mbale” [-15.16667, 16.75000] (Monard 1937b:131); “Mupa” [-16.18333, 15.75000] (Monard 1937b:131;



MAP 311. Distribution of *Psammophis mossambicus* in Angola.

Loveridge 1940:30); “Mupanda” [-17.13333, 15.76667] (Monard 1937b:131; Loveridge 1940:30); “Tala Kilau, Mossamedes” (Broadley 2002:113). **Cuando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1937b:131; Loveridge 1940:30); “Kayundo” [-15.70000, 17.45000] (Loveridge 1940:30); “vincity of Cuito Cuanavale - approximatley 75 km W of Mavinga” [-15.78333, 19.70000] (Branch and McCartney 1992:2); “Cubango basin (48)” [-14.68136, 17.44530] (Conradie et al. 2016:9, 12, 22). **Undetermined Locality:** “without precise location” (Laurent 1954:59, 1964a:113); “Cascalada 6 km NW” (Broadley 2002:113); “Marimo 10 km W of Machado” (Broadley 2002:113).

Taxonomic and distributional notes: The taxonomy of the *Psammophis sibilans* complex, to which this species belongs, remains confused (Kelly et al. 2008; Wallach et al. 2014) and we have here treated Angolan specimens previously refered to *P. sibilans* (Linnaeus, 1758) (except those attributed to *P. zambiensis*) and *P. phillipsii* (Hallowell, “1844” 1845) as *P. mossambicus* (e.g., Loveridge 1953; Broadley 1977b; Broadley et al. 2003). Brandstätter (1996) and Hughes (1999) considered *P. phillipsii* to be restricted to West Africa, and Branch (1998) was the first to use the name *P. mossambicus* Peters, 1882 to refer to the former southern and East African populations of *P. phillipsii*. Broadley (2002a) likewise recognized that the Angolan material initially assigned to *P. sibilans* and *P. phillipsii* should be attributed to *P. mossambicus*.

Psammophis namibensis Broadley, 1975

NAMIB SAND SNAKE

Psammophis leightoni namibensis Broadley 1975b:9, pl. 1. Holotype: TM 37093 (collector W.D. Haacke).

Type locality: “Harus in the Uri-Hauchab Mountains, Diamond Area No. 2, South West Africa” [= Karas Region], Namibia.

Psammophis leightoni namibensis: Broadley (1977b:11, 1990:136), Brandstätter (1996:68), Branch (1998:90).

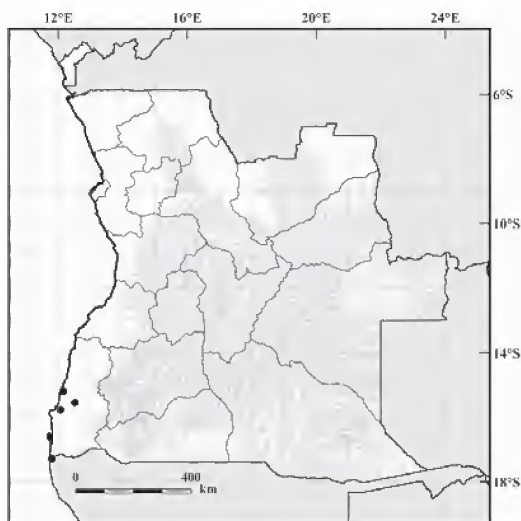
Psammophis namibensis: Broadley (2002:91), Bates et al. (2014:378), Wallach et al. (2014:577).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from arid regions, including desert and succulent scrubland, occurring along the southwest Africa, from southwestern Angola extending through the Namib Desert into western Namibia, to Namaqualand, in the Northern Cape Province, South Africa.

Ocurrences in Angola (Map 312): The species occurs in the southwestern Angola in the Namib Desert. **Namibe:** “Mossamedes” [-15.20000, 12.15000] (Broadley 1975b:11; 2002a:107); “Pico Acezevedo” [-15.55000, 12.51667] (Broadley 2002:107); “Rio Coroca” [-15.78333, 12.06667] (Broadley 1975b:11; 2002a:107); “Foz do Cunene” [-17.28333, 11.80000] (Broadley 1975b:11; 2002a:107); “Cunene Forde, 15 km NE, Iona Res.” (Broadley 2002:107).

Taxonomic and distributional notes: Broadley (1975b) initially described this form as a new subspecies of *Psammophis leightoni* Boulenger, 1902, but later considered it a full species (Broadley 2002). Kelly et al. (2008),



MAP 312. Distribution of *Psammophis namibensis* in Angola.

however, noted that *Psammophis namibensis* and *Psammophis leightoni* might represent a single species (Bates et al. 2014; Wallach et al. 2014).

***Psammophis notostictus* Peters, 1867**

KAROO SAND SNAKE

Psammophis moniliger var. *notostictus* Peters 1867a:237. Syntypes: ZMB 5756a-b (collector C.H. Hahn). Type locality: “Otjimbingue in Südwestafrika” [= Otjimbingwe, SE Karibib District, Erongo Region], Namibia.

Psammophis sibilans var. *stenocephalus* Bocage (1887a:205). Holotype: MBL specimen, number unknown (collectors H.C. Capello and R. Ivens). Type locality: “intérieur de Mossamedes” (Bocage 1887b:205), corrected to “Rio Coroca” by Bocage (1895a:116), Namibe Province, Angola.

Psammophis sibilans var. B (var. *stenocephala*): Bocage (1895a:116).

Psammophis notostictus: Boulenger (1895a:538, 1896:156, 1915:213), Monard (1937b:128), FitzSimons (1962:223), Frade (1963:253), Broadley (1975b:13, 1977b:10, 2002a:87), Brandstätter (1996:77), Branch (1998:90), Bates et al. (2014:377); Wallach et al. (2014:577); Ceriaco et al. (2014b:41).

Psammophis sibilans notostictus: Loveridge (1940:44).

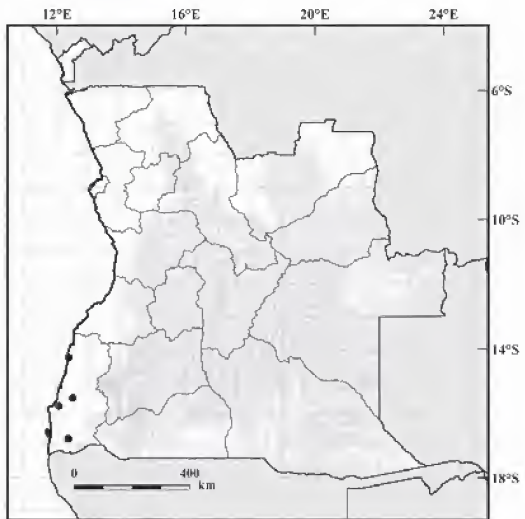
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Karroid bushveld, Namib Desert and fynbos areas from southwestern Angola, south through Namibia to the Cape Peninsula and eastwards through the Karoo to the Albany District, Eastern Cape Province.

Occurrences in Angola (Map 313): The species occurs in the southwestern Angola in the Namib Desert. **Namibe:** “Espinheira” [-16.78717, 12.35764] (Ceriaco 2016b: 41); “Pico Azevedo” [-15.53400, 12.49197] (Ceriaco 2016b: 41); “São Nicolao River” [-14.26667, 12.36667] (Boulenger 1896:156; Loveridge 1940:44; Broadley 1975a:14, 2002a:103); “intérieur de Mossamedes (= Rio Coroca)” [-15.78333, 12.06667] (Bocage 1887a:205, 1895a:116; Monard 1937b:128; Loveridge 1940:44; Broadley 1975b:14, 1977b:10, 2002a:87,103).

Taxonomic and distributional notes:

Psammophis sibilans var. *stenocephalus* Bocage 1887, was synonymized with *Psammophis notostictus* Peters, 1867 by Boulenger (1895a). *Psammophis notostictus* was described as a variety of *Psammophis moniliger* (Linnaeus, 1758) by Peters (1867a) but was also treated as a variety of *P. sibilans* (Linnaeus, 1758) by several authors (see Broadley 1975b). Bocage (1895a) referred to *P. sibilans* var. B, but in the same account equated this with his *P. s.* var. *stenocephalus* Bocage, 1887. Boulenger (1896) treated *P. notostictus* as a full species, and was followed by several authors until Loveridge (1940) again considered it as a subspecies of *P. sibilans*. Mertens (1955) restored *notostictus* to its current specific rank.



MAP 313. Distribution of *Psammophis notostictus* in Angola.

***Psammophis subtaeniatus* Peters, 1882**

STRIPE-BELLIED SAND SNAKE

Psammophis sibilans var. *subtaeniata* Peters 1882c:121. Lectotype: ZMB 9992A designated by Broadley (1977b:13). Type locality: “sowohl im Innern des Landes bei Tette, als näher der Küste, wie bei Boror,”

restricted to “Tete, Moçambique” by Broadley (1966b).

Psammophis bocagii Boulenger (1895a:538). Syntype: BMNH 67.7.23.22 (collector Donaldson Smith). Type locality: “Angola” later given as “Benguella,” Angola (Boulenger 1896:161).

Psammophis sibilans var. A (var. *subtaeniatus*): Bocage (1895a:116).

Psammophis bocagii: Boulenger (1896:161, 1915:213), Monard (1937b:131), Bogert (1940:82).

Psammophis Bocagii: Bocage (1897a:201).

Psammophis subtaeniatus subtaeniatus: Loveridge (1940:55), Broadley (1966b:6, 1977b:13), Brandstätter (1996:99).

Psammophis subtaeniatus: Branch (1998:91), Broadley (1990:342, 2002b:93), Bates et al. (2014:379), Wallach et al. (2014:580), Conradie et al. (2016:22).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from southern Angola and northern Namibia, east through Botswana to southern Zambia, Zimbabwe, parts of western Mozambique, the northeastern provinces of South Africa and eastern Swaziland.

Occurrences in Angola (Map 314): The species occurs in southern Angola. **Benguela:**

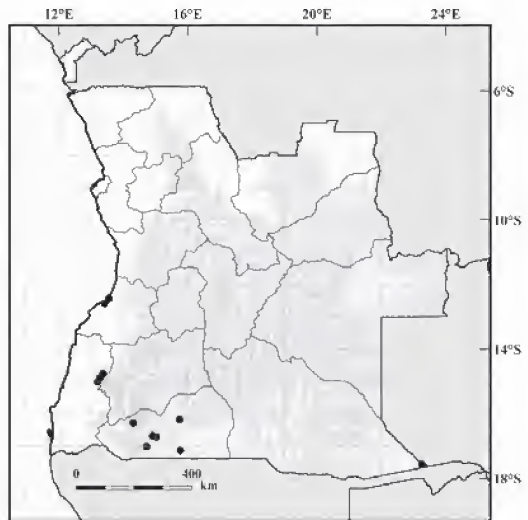
“Catumbella” [-12.43333, 13.55000] (Bocage 1895a:115, 1897a:201; Loveridge 1940:55; Broadley 2002:108); “Benguella” [-12.58333, 13.41667] (Boulenger 1896:161; Loveridge 1940:55; Broadley 1966b:8, 1977b:13, 2002a:108).

Huíla: “Molundo” [-15.01667, 13.20000] (Monard 1937b:131; Loveridge 1940:55). **Namibe:** “Biballa” [-14.76667, 13.36667] (Bocage 1895a:115, 1897a:201; Loveridge 1940:55); “Chao de Chella” [-14.88944, 13.27417] (Broadley 2002:108); “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:115, 1897a:201; Loveridge 1940:55; Broadley 2002:108).

Cunene: “Mupa” [-16.18333, 15.75000] (Bocage 1897a:201; Loveridge 1940:55; Broadley 2002:108); “Cahama 5 km SE” [-16.28333, 14.30000] (Broadley 2002:108); “Humbe” [-16.68333, 14.90000] (Bocage 1895a:115, 1897a:201; Loveridge 1940:55; Broadley 2002:108); “Forte Roçadas” [-16.71667, 15.01667] (Monard 1937b:131; Loveridge 1940:55; Broadley 2002:108); “Dongwenna, Mossamedes” [-17.01667, 14.71667] (Broadley 2002:108). “Mupanda” [-17.13333, 15.76667] (Monard 1937b:131; Loveridge 1940:55; Broadley 2002:108); “Cunene” (Bocage 1895a:114; Loveridge 1940:55; Broadley 2002:108).

Cuando Cubango: “Cuito drainage” [-17.57333, 23.26000] (Conradie et al. 2016:9-10, 22). **Undetermined Locality:** “Cuanza” (Bocage 1895a:115); “Rio Bengo” (Bocage 1895a:115, 1897a:201; Loveridge 1940:55; Broadley 2002:108); “Pen Pen” (Broadley 2002:108).

Taxonomic and distributional notes: *Psammophis subtaeniatus* has been known by a variety of names, Boulenger (1895a) restricted the name *subtaeniatus* to the eastern form and erected a new name, *Psammophis bocagii* (Boulenger 1895), for the western race based on specimens from Angola (Broadley 1977b). The description appears as part of a key and no precise locality or number of specimens is given, however, the fact that a range of scale counts is provided demonstrates that there was originally a syntype series. Boulenger (1896) indicated that the single BMNH specimen had come from Bocage in Lisbon, so it is likely that at least one syntype remained in the MBL



MAP 314. Distribution of *Psammophis subtaeniatus* in Angola.

collection, perhaps not marked as such. Bocage (1895a) referred to *P. sibilans* var. A, but in the same account equated this with *P. s.* var. *subtaeniatus* Peters, 1882. Loveridge (1940) used *P. subtaeniatus subtaeniatus* for the western form and placed *P. bocagii* in its synonymy.

Psammophis trigrammus Günther, 1865

WESTERN SAND SNAKE

Psammophis trigrammus Günther 1865b:95, pl. 2, fig. e. Holotype: BMNH 1946.1.8.12 (formerly BMNH 64.7.11.4) (collector J. Monteiro). Type locality: “on the banks of river S. Nicolao (Little Fish Bay, West Africa)” [= Rio São Nicolau], Namibe Province, Angola.

Psammophis trigrammus: Bocage (1887b:206), Loveridge (1940:23), FitzSimons (1962:221), Broadley (1977b:9, 1990:133, 2002a:87), Brandstätter (1996:104), Branch (1998:89), Bates et al. (2014:379), Wallach et al. (2014:581).

Global conservation status (IUCN): Not Evaluated.

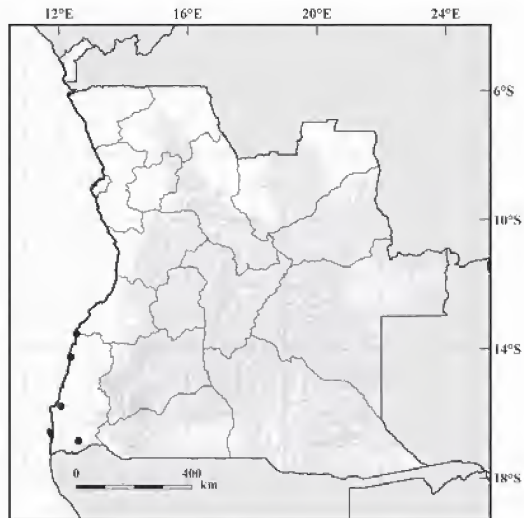
Global distribution: The species is known from southern Angola and western Namibia, reaching its southern limit in the extreme north of the Richtersveld, South Africa.

Occurrences in Angola (Map 315): The species is restricted to Namibe Province.

Namibe: “Catara River” [-13.55000, 12.55000] (Broadley 2002:103); “on the banks of river S. Nicolao (Little Fish bay, West Africa)” [-14.26667, 12.36667] (Günther 1865b:95); “Rio de São Nicolau, Mossamedes (Rio San Nicolau)” [-14.26667, 12.36667] (Bocage 1887b:206; Loveridge 1940:23; FitzSimons 1962:221; Broadley 1977b:9, 1990:133, 2002ba:86, 103; Wallach et al. 2014:581); “Rio Coroca” [-15.78333, 12.06667] (Broadley 2002:103); “Iona Reserve, 7 km to Oncócuá” [-16.85831, 12.61275] (Broadley 2002:103).

Taxonomic and distributional notes:

Bocage (1887b) corrected the type locality to “Mossamedes” [= Rio São Nicolau, Namibe].



MAP 315. Distribution of *Psammophis trigrammus* in Angola.

Psammophis zambiensis Hughes and Wade, 2002

ZAMBIAN WHIP SNAKE

Psammophis zambiensis Hughes and Wade 2002:75. Holotype: BMNH 1959.1.1.81 (collector H.J. Bredo). Type locality: “supposedly from “Abercorn” (= Mbala) area of Zambia ... but likely to be from Mweru-Wantipa”.

Psammophis sibilans sibilans: Laurent (1950a:9, 1954a:59), Thys van den Audenaerde (1966:34).

Philothamnus irregularis irregularis: Manaças (1973:191).

Psammophis zambiensis: Broadley and Cotterill (2004:49), Wallach et al. (2014:582).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known with certainty from the southern Democratic Republic of Congo and northern Zambia. Literature records of *Psammophis sibilans* that may be referable to *P. zambiensis* exist from the Caprivi Strip of Namibia and adjacent northern Botswana, northern Zimbabwe, Malawi, Zambezia Province of Mozambique and northeastern Angola.

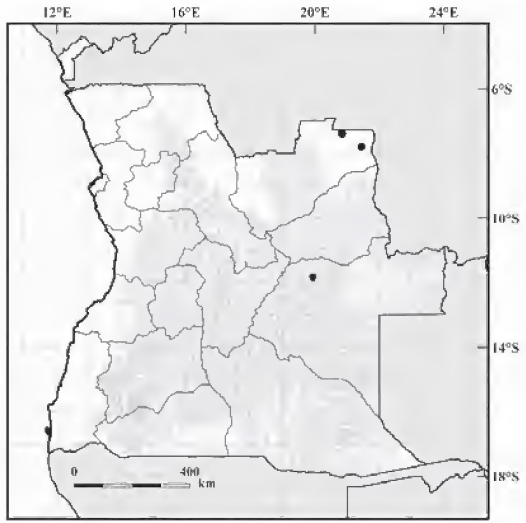
Occurrences in Angola (Map 316): None confirmed but *Psammophis zambiensis* is expected to occur in northeastern regions of the country. The following records are *P. ‘sibilans’* records that

may be referable to *P. zambiensis*. **Mexico:** “Calombe” [-11.83333, 19.93333] (Manaças 1973:191). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:9, 1954a:59, 1964a:113; Thys van den Audenaerde 1966:34); “Barrage de la Luachimo” [-7.38333, 20.85000] (Thys van den Audenaerde 1966:34); “Dundo, R. Mussungue, aff. Luachimo” [-7.41667, 20.83333] (Thys van den Audenaerde 1966:34); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1954a:59).

Taxonomic and distributional notes:

Hughes and Wade (2002) found significant differences between specimens of “*leopardinus*” from Angola and from Zambia and described *P. zambiensis* to accommodate the latter. Some eastern records of *P. leopardinus* could correspond to this new species. Hughes and Wade (2002) presented information from Desmond

Vesey-FitzGerald via Donald G. Broadley that substantiated the likely origin of the holotype from Mweru-Wantipa in the Mporokoso District [Zambia]. Hughes and Wade (2002) plotted localities of *Psammophis* ‘*sibilans*’ from the literature, which could include material assignable to *P. zambiensis*. Two such Angolan records correspond to literature references from Laurent (1950, 1954a, 1964a) and Thys van den Audenaerde (1966). Wallach et al. (2014) included only the former province of Katanga (Democratic Republic of Congo) and northern Zambia in the distribution of the species, corresponding to the verified records given in the description.



MAP 316 Distribution of *Psammophis zambiensis* in Angola.

Genus *Psammophylax* Fitzinger, 1843

***Psammophylax acutus* (Günther, 1888)**

STRIPED BEAKED SNAKE

Psammophis acutus Günther 1888:327, pl. 19, fig. d. Holotype: BMNH 1946.1.2.81 (formerly BMNH 1864.7.13.36) (collector F.M.J. Welwitsch). Type locality: “Pungo Andongo,” Malanje Province, Angola.

Psammophis oxyrhynchus: Günther (1865a:480, 1895:89).

Rhagerhis acuta: Bocage (1895a:111).

Rhamphiophis acutus: Boulenger (1896:148, 1905:113, 1915:212), Loveridge (1933:252), Hellmich (1957b:71), Manaças (1973:195), Broadley et al. (2003), Spawls et al. (2004:398), Chippaux (2006:170).

Rhamphiophis acutus (*Rhagerhis acuta*): Monard (1937b:128).

Rhamphiophis acutus wittei: Laurent (1964a:111).

Rhamphiophis acutus acutus: Loveridge (1957:277), Laurent (1964a:111), Broadley (1971b:3), Chirio and Ineich (1991:220).

Rhamphiophis acutus jappi: Broadley (1971d:4).

Psammophylax tritaeniatius tritaeniatius: Manaças (1973:194).

Psammophylax acutus acutus: Kelly et al. (2008:1052).

Psammophylax acutus jappi: Kelly et al. (2008:1052).

Psammophis acutus: Wallach et al. (2014:575).

Psammophylax acutus: Conradie et al. (2016:22).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Gabon to the former province of Katanga (Democratic Republic of Congo) to Angola and east to northern Malawi, western Tanzania and

Burundi. Records from northern Namibia (M. Griffin *in* Wallach et al. 2014) have not been verified or vouchered.

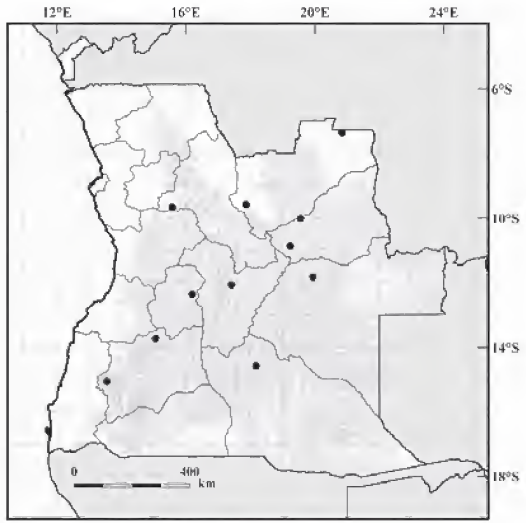
Ocurrences in Angola (Map 317): The species occurs from southwestern regions of Huíla Province to central and northeastern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:111; Broadley 1971d:4); “Cassange” [-9.58333, 17.86667] (Bocage 1895a:111; Broadley 1971d:3).

Lunda Sul: “Alto Cuílo” [-10.01667, 19.55000] (Laurent 1964a:111; Broadley 1971d:3); “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:111; Broadley 1971b:3).

Moxico: “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1973:194, 195). **Malanje:** “Pungo-Andongo” [-9.66667, 15.58333] (Günther 1865a:480; 1888:327, 1895:89; Bocage 1895a:111; Boulenger

1896:148; Loveridge 1933:252; Monard 1937b:128; Broadley 1971d:3; Chirio and Ineich 1991:220; Chippaux 2006:170; Wallach et al. 2014:575). **Huambo:** “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:71; Broadley 1971d:3). **Benguela:** “Bigondo” [-12.06667, 17.41667] (Monard 1937b:128). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:111; Monard 1937b:128; Broadley 1971d:3); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:111; Monard 1937b:128; Broadley 1971d:3). **Cuando Cubango:** “Longa River (23)” [-14.58972, 18.17083] (Conradie et al. 2016:8-9, 22); “Longa River (51)” [-14.58970, 18.1711] (Conradie et al. 2016:8, 12, 22). **Undetermined locality:** “Between Benguella and Bihé” (Boulenger 1905:113; Broadley 1971d:3).

Taxonomic and distributional notes: Broadley (1971b) recognized three subspecies: *Rhamphiophis a. acutus*, *R. a. jappi* (Broadley, 1971) and *R. a. togoensis* (Matschie, 1893) and provisionally synonymized *Rhamphiophis acutus wittei* (Laurent, 1956) with the nominate form. Recently Kelly et al. (2008) showed that *Rhamphiophis* is diphyletic and transferred *R. acutus* and its subspecies to the genus *Psammophylax*. The specimen from “Dundo” (MD 5193-A) identified by Laurent (1964a) as *R. a. acutus* and later as *R. a. jappi* by Broadley (1971d) is here interpreted as the typical form. We recently examined the specimen identified by Manaças (1973) as *Psammophylax tritaeniatius tritaeniatius* (Günther, 1868) from “Calombe, Luso” deposited in the Instituto de Investigação Científica Tropical, Lisboa and it is likewise referable to *Psammophylax a. acutus*. Wallach et al. (2014) erroneously allocated *R. acutus* to *Psammophis*.



MAP 317. Distribution of *Psammophylax acutus* in Angola.

***Psammophylax rhombeatus ocellatus* (Bocage, 1873)**

SPOTTED SKAAPSTEKER (Endemic)

Psammophylax ocellatus Bocage 1873a:221. Holotype: MBL specimen number unknown (collector J.A. d'Anchieta), specimen lost *vide* Broadley (1977c). Type locality: “l'intérieur de Mossamedes (Gambos)” [= Gambos], Huíla Province, Angola.

Psammophis rhombeatus?: Bocage (1867b:224).

Psammophylax rhombeatus: Bocage (1895a:108), Boulenger (1896:138, 1915:211), Bates et al. (2014), Wallach et al. (2014:582).

Trimerorhinus rhombeatus: Monard (1937b:126, 128).

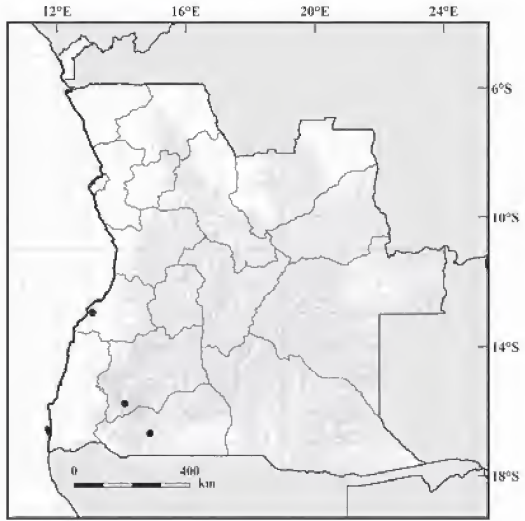
Psammophylax rhombeatus ocellatus: Broadley (1977c:20, 1990:121), Branch (1998:88).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The subspecies is endemic to southern Angola.

Occurrences in Angola (Map 318): The subspecies occurs in southwestern Angola near Namibia border. **Benguela:** “Dombe” [-12.95000, 13.10000] (Bocage 1867b:224). **Huíla:** “Gambos” [-15.76667, 14.10000] (Bocage 1873a:221, 1895a:108; Monard 1937b:128; Broadley 1977d:20-21). **Cunene:** “Humbe” [-16.68333, 14.90000] (Bocage 1895a:108; Boulenger 1896:139, Monard 1937b:128; Broadley 1977c:21). **Undetermined Locality:** “No specific locality (Coll. Anchieta)” (Broadley 1977d:21).

Taxonomic and distributional notes: Broadley (1977c) and subsequent authors (Broadley 1990; Branch 1998; Bates et al. 2014) have considered *P. r. ocellatus* (Linnaeus, 1758) as a valid subspecies. The type of *Psammophylax ocellatus* Bocage, 1873 was not located by Broadley during his visit to the Museu Bocage in 1968 (Broadley 1977b). Wallach et al. (2014) noted that Broadley (1977d) had restricted the type locality of *P. r. rhombeatus* to “SW Western Cape Prov., South Africa” but Broadley took no such formal action, merely noting that the type specimens “agree well” with specimens of *P. rhombeatus rhombeatus* from the southwestern Cape Province, from where the types doubtless originated.



MAP 318. Distribution of *Psammophylax rhombeatus ocellatus* in Angola.

***Psammophylax tritaeniatus* (Günther, 1868)**

STRIPED SKAAPSTEKER

Rhagerrihis tritaeniata: Günther 1868:423, pl. 19, fig. H. Holotype: BMNH 1946.1.2.78 (collector Warwick).

Type locality: “probably from South-eastern Africa”, (“presumably Rhodesia [Zimbabwe] or the Transvaal” [= Limpopo or Mpumalanga], South Africa *vide* Broadley 1977c:32).

Rhagerrihis tritaeniata: Bocage (1873b:220, 1879b:95, 1887c:210, 1895a:110, 1896a:112, 1897b:211), Ferreira (1897b:244).

Cerastes tritaeniatus tritaeniatus: Mertens (1937a:14, 1938a:441), Bogert (1940:77).

Trimerorhinus rhombeatus tritaeniatus: Monard (1937b:130).

Psammophylax tritaeniatus tritaeniatus: Hellmich (1857b:71), Loveridge (1957:276), Laurent (1964a:110).

Psammophylax tritaeniatus: Broadley (1977c:32, 1990:124), Branch (1998:88), Wallach et al. (2014:583).

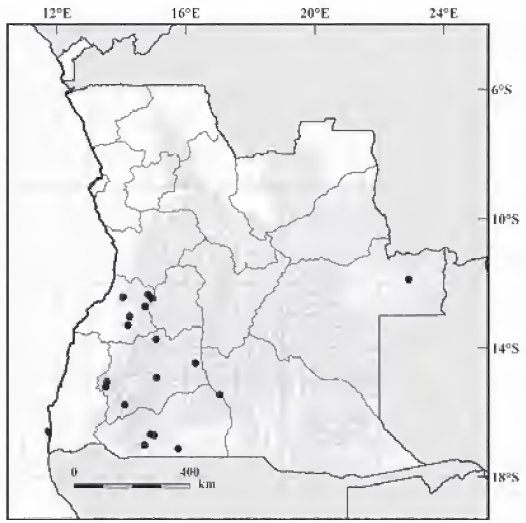
Global conservation status (IUCN): Least Concern.

Global distribution: The species endemic to sub-Saharan Africa, from the former province of Katanga, Democratic Republic of Congo, Angola and Zambia to southern Tanzania and south through Zimbabwe, western Mozambique, Botswana, northern Namibia and northeastern South Africa.

Occurrences in Angola (Map 319): The species distribution probably comprises the most southern regions of Angola, with exception of the Namibe Province, as well as Moxico. **Moxico:** “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:110; Broadley 1977c:36). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:110; Broadley 1977c:36); “Quissange” [-12.43333, 14.05000] (Bocage 1887c:210, 1895a:110; Broadley 1977c:36); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:110; Broadley 1977c:36); “Ebanga” [-12.73333, 14.73333] (Monard

1937b:130; Broadley 1977c:36); “Cubal (Alto Cubal)” [-13.03333, 14.25000] (Mertens 1937a:14, 1938a:441; Hellmich 1957b:71; Broadley 1977c:36); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:112, 1897b:211). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:110; Ferreira 1897b:244; Broadley 1977c:36); “Kuvangu (Vila-da-Ponte)” [-14.46667, 16.30000] (Monard 1937b:130; Broadley 1977c:36); “Capelongo” [-14.91667, 15.08333] (Bogert 1940:77; Broadley 1977c:36); “Huilla” [-15.05000, 13.55000] (Bocage 1873b:220, 1895a:110); “Jau, environs de Sá da Bandeira” [-15.20000, 13.51667] (Laurent 1964a:110; Broadley 1977c:36); “Gambos” [-15.76667, 14.10000] (Bocage 1873b:220, 1895a:110). **Cunene:** “Forte Roçadas” [-16.71667, 15.01667] (Laurent 1964a:110; Broadley 1977a:36); “Humbe” [-16.68333, 14.90000] (Bocage 1895a:110; Broadley 1977c:36); “Dongwenna” [-17.01667, 14.71667] (Broadley 1977c:36); “Mupanda” [-17.13333, 15.76667] (Monard 1937b:130; Broadley 1977c:36); “36 km NW of Humbe” (Broadley 1977b:36). **Quando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1937b:130). **Undetermined Locality:** “without precise location” (Bocage 1879b:95).

Taxonomic and distributional notes: Manaças’s (1973) reference to *Psammophylax tritaeniatius tritaeniatius* (Günther, 1868) from “Calombe, Luso” in the Instituto de Investigação Científica Tropical, Lisboa is referable to *Psammophylax a. acutus*.



MAP 319. Distribution of *Psammophylax tritaeniatius* in Angola.

Genus *Pseudaspis* Fitzinger, 1826

Pseudaspis cana (Linnaeus, 1758)

MOLE SNAKE

Coluber canus Linnaeus 1758:221. Holotype: NHR Lin-22, formerly MAFR (ex Mus. Drottingholm). Type locality: “Indiis” [= India] (Linnaeus 1758:221), in error, corrected to “Cape of Good Hope” *fide* Wallach et al. (2014:585), South Africa.

Ophirhina Anchietae: Bocage 1882a:300. Syntypes: MBL specimen numbers unknown (collector J.A. d’Anchieta), destroyed by fire 18 March 1978. Type locality: “Caconda, dans l’intérieur de Benguella” [= Caconda] Huíla Province, Angola.

Pseudaspis cana: Bocage (1895a:100), Branch (1998:80), Boulenger (1915:204), Monard (1937b:118), Bogert (1940:42), Loveridge (1957:266), FitzSimons (1962:162), Frade (1963:253), Broadley (1990:108), Broadley et al. (2003:147), Broadley and Cotterill (2004:49), Kelly et al. (2009:46), Bates et al. (2014:392), Wallach et al. (2014:585).

Pseudaspis cana anchietae: Laurent (1956:141).

Global conservation status (IUCN): Not Evaluated.

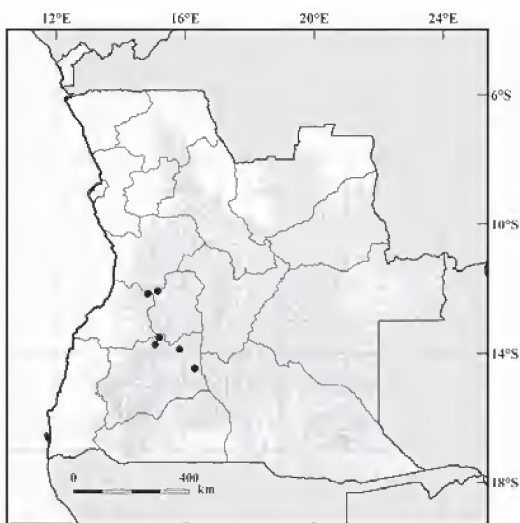
Global distribution: The species is known from throughout southern Africa, extending north to Angola, Zambia, the former Katanga Province of the Democratic Republic of Congo, Burundi, Rwanda and the Kenya highlands.

Ocurrences in Angola (Map 320): The species occurs in the central-southern areas, Kwanza Sul and Huíla Province. It is probable that the distribution of this species reaches the southeastern

regions of the country. **Kwanza Sul:** “Mombolo” [-12.16667, 14.83333] (Bogert 1940:42; Laurent 1956:141). **Huambo:** “Galanga” [-12.06667, 15.15000] (Bocage 1895a:100; Monard 1937b:113; Laurent 1956:141). **Huíla:** “Rio Cuce” [-13.51667, 15.20000] (Bocage 1895a:100; Monard 1937b:113; Laurent 1956:141); “Caconda” [-13.73333, 15.06667] (Bocage 1882a:300, 1895a:100; Monard 1937b:113; Laurent 1956:141; Loveridge 1957:266); “Sangevé” [-13.88333, 15.83333] (Monard 1937b:113, 118; Laurent 1956:141); “Kuvangu (Vila-da-Ponte)” [-14.46667, 16.30000] (Monard 1937b:113, 118; Laurent 1956:141).

Taxonomic and distributional notes:

Kelly et al. (2009) revived the family Pseudaspidae Dowling and Duellman, 1978 for two monotypic genera, *Pseudaspis* (*P. cana*) and *Pythonodipsas* (*P. carinata* Günther, 1868). This clade has, however, subsequently been treated as a subfamily, Pseudaspidinae, by Pyron et al. (2010, 2013). Laurent (1956) recognized *P. c. anchietae* (Bocage, 1882) as a valid subspecies, but Broadley (1990) considered evidence for the recognition of a taxonomically distinct northern form to be unconvincing.



MAP 320. Distribution of *Pseudaspis cana* in Angola.

Genus *Pythonodipsas* Günther, 1868

***Pythonodipsas carinata* Günther, 1868**

WESTERN KEELED SNAKE

Pythonodipsas carinata Günther 1868:427. Holotype: BMNH 1946.1.4.70, formerly SAM (collector J. Chapman). Type locality: “Zambezi” (Günther 1868:427), in error, corrected to “Damaraland, South West Africa” by Broadley (1971c:679).

Pythonodipsas carinata: FitzSimons (1962:181), Broadley (1971c:679, 1990:110), Branch et al. (1997:89), Branch (1998:82), Kelly et al. (2009:46), Bates et al. (2014:388), Wallach et al. (2014:612).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is restricted to gravel plains and arid savannah from the Bethanie District in southern Namibia, northwards into the coastal desert of southern Angola.

Occurrences in Angola (Map 321): The species occurs at the edges of the Angolan Namib Desert in the southern portion of Namibe Province.



MAP 321. Distribution of *Pythonodipsas carinata* in Angola.

Namibe: “Quarter Degree Square 1512Aa” [=Saco; -15.125, 12.125] (Branch et al. 1997:94); “Quarter Degree Square 1612Cd” [-16.875, 12.375] (Branch et al. 1997:94); “Quarter Degree Square 1613Ca” [-16.625, 12.125] (Branch et al. 1997:94).

Taxonomic and distributional notes: Kelly et al. (2009) revived the family Pseudaspidae Dowling and Duellman, 1978 for *Pseudaspis* and *Pythonodipsas* but this clade has subsequently been treated as a subfamily, Pseudaspidinae, by Pyron et al. (2010, 2013). Despite the few literature references for this species in Angola, it is expected to be widespread in the Namib Desert of the southwest (e.g., FitzSimons 1962; Broadley 1990; Branch et al. 1997; Branch 1998; Branch 1998; Bates et al. 2014; Wallach et al. 2014). Branch et al. (1997) provided the first literature records from southwestern Angola, all as quarter degree points plotted on a map.

Genus *Xenocalamus* Günther, 1868

Xenocalamus bicolor machadoi Laurent, 1954

MACHADO’S QUILL-SNOURED SNAKE

Xenocalamus bicolor machadoi Laurent 1954a:45, figs. 9–11. Holotype: MD 2082 (collector A. Barros Machado). Type locality: “Dundo,” Kwanza Norte Province, northeastern Angola.

Xenocalamus Mechovii: Boulenger (1905:113).

Xenocalamus bicolor pernasutus: de Witte and Laurent (1947:46).

Xenocalamus bicolor machadoi: Broadley (1971a:680), Branch (1998:68).

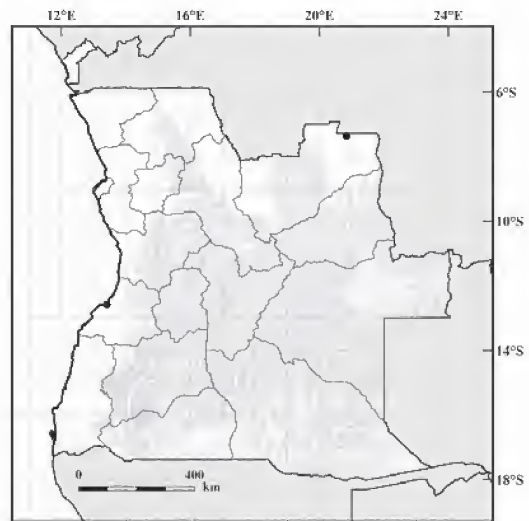
Xenocalamus bicolor: Wallach et al. (2014:780).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and the western Katanga region, Democratic Republic of Congo.

Occurrences in Angola (Map 322): The species distribution may comprise the entire country with exception of the northwestern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:45; Broadley 1971a:681). **Benguela:** “Benguella” [-12.58333, 13.41667] (Laurent 1954a:45). **Undetermined locality:** “Between Benguella and Bihé” (Boulenger 1905:113; de Witte and Laurent 1947:46; Broadley 1971a:681).

Taxonomic and distributional notes: Laurent (1954a) described *Xenocalamus bicolor machadoi* as a new subspecies based on a female holotype specimen from “Dundo,” Lunda Norte Province, from the Barros Machado collection in the Museu do Dundo, as well as a paratype from “Sandoa, dist. Lualaba, Congo Belge” and a specimen from Boulenger (1905) identified as *Xenocalamus mechovii* from “Between Benguella and Bihé.” It is expected that the nominate form, *Xenocalamus bicolor bicolor*, also occurs in Angola, presumably in the southeastern regions of the country, although it has not yet been documented. Figueroa et al. (2016) synonymized *Xenocalamus* with *Amblyodipsas*, however, as their data were limited, we retain the highly distinctive *Xenocalamus* as valid pending further data.



MAP 322. Distribution of *Xenocalamus bicolor machadoi* in Angola.

Xenocalamus mechowii mechowii* Peters, 1881*ELONGATE QUILL-SNOURED SNAKE**

Xenocalamus Mechowii Peters 1881:147. Holotype: ZMB 10044 (collector F.W. von Mechow). Type locality: “Malanje,” Malanje Province, Angola.

Xenocalamus Mechovii: Boulenger (1915:214).

Xenocalamus mechowii: Monard (1937b:127), Branch (1998:69), Broadley (2003:88), Chippaux (2006:213), Wallach et al. (2014:781).

Xenocalamus mechowii mechowii: de Witte and Laurent (1947:49), Broadley (1971a:681) Laurent (1954a:45).

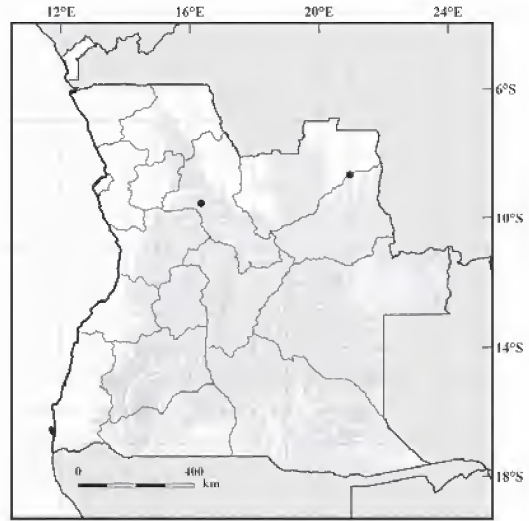
Xenocalamus mechowii inornatus: Branch and McCartney (1992:2).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species as a whole is known from southern Congo and Democratic Republic of Congo. Through eastern Angola, to northeastern Namibia, northern Botswana and northwestern Zimbabwe.

Ocurrences in Angola (Map 323): The species probably occurs throughout the entire country with the exception of the western regions along the coast. **Lunda Norte:** “Sombo (Kassekue river, right affluent of Chiumbe)” [-8.68333, 20.95000] (Laurent 1954a:45). **Malanje:** “Malanje” [-9.55000, 16.35000] (Peters 1881:147; de Witte and Laurent 1947:49; Chippaux 2006:213).

Taxonomic and distributional notes: Within Angola Broadley (1971a), considered the typical form to be restricted to northern Angola. Figueroa et al. (2016) synonymized *Xenocalamus* with *Amblyodipsas*, however, as their data were limited, we retain the highly distinctive *Xenocalamus* as valid pending further data.



MAP 323. Distribution of *Xenocalamus mechowii mechowii* in Angola.

***Xenocalamus mechowii inornatus* de Witte and Laurent, 1947** **INORNATE ELONGATE QUILL-SNOURED SNAKE**

Xenocalamus mechowii inornatus de Witte and Laurent 1947:51. Holotype: SAM 19719 (collector unknown).

Type locality: “Ovamboland (Sud-Ouest africain)” [= Ovamboland, Namibia].

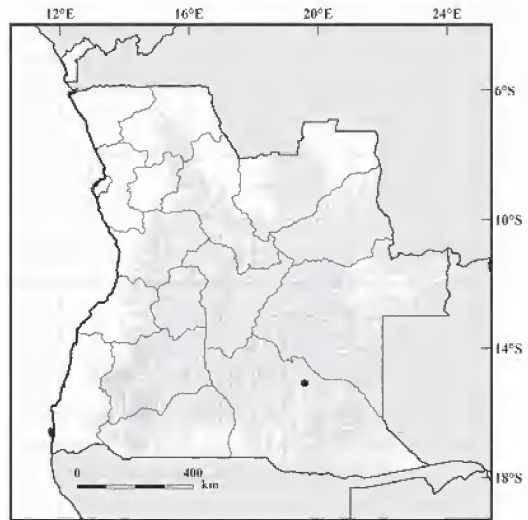
Xenocalamus mechowii inornatus: Branch and McCartney (1992:2).

Global conservation status (IUCN): Not Evaluated.

Global distribution: This subspecies is known from northern and northeastern Namibia, and adjacent regions of Zambia, Botswana, Zimbabwe and Angola.

Ocurrences in Angola (Map 324): This subspecies is confirmed from a single record in the southeast of the country, but it may occur more broadly. **Cuando Cubango:** “vicinity of Cuito Cuanavale- approximately 45 km S of Lupire” [-15.08333, 19.58333] (Branch and McCartney 1992:2).

Taxonomic and distributional notes: Branch and McCartney (1993) recorded *X. mechowii inornatus* from Cuando Cubango Province and considered theirs to be first record of the southern race in Angola, although there are several records from immediately adjacent to Cuando Cubango in the Caprivi Strip and western Zambia.



MAP 324. Distribution of *Xenocalamus mechowii inornatus* in Angola.

Family Elapidae Boie, 1827

Genus *Aspidelaps* Fitzinger, 1843

Aspidelaps lubricus cowlesi Bogert, 1940

ANGOLAN CORAL SNAKE

Natrix lubrica Laurenti 1768:80. Lectotype: specimen described and illustrated by Seba (1735:44, pl. 43, fig. 3) *vide* Wallach et al. (2014:55, see Notes below), lost *vide* Broadley in Golay et al. (1993:113) although status considered unknown by Broadley and Baldwin (2006). Type locality: restricted to “Africa” based on the lectotype designation (Laurenti 1768:80) and more specifically to “ex Promontorio Bonae Spei/Cap de Bonne-Esperance” [= Cape of Good Hope, Western Cape Province], South Africa (Seba 1735:44).

Aspidelaps lubricus cowlesi Bogert 1940:94, fig. 17A–D. Holotype: AMNH 32801 (collectors A.S. Vernay, H. Lang and R. Boulton). Type locality: “Munhino (101 km east of Mossamedes, via railroad)” (Bogert 1940:95) [= Muninho, 101 km east of Namibe], Namibe Province, Angola.

Aspidelaps lubricus cowlesi: FitzSimons (1962:278), Manaças (1981:21), Broadley (1990:281), Spawls and Branch (1995:54), Branch (1998:104), Broadley and Baldwin (2006:167), Dobiey and Vogel (2007:32), Wallach et al. (2014:55).

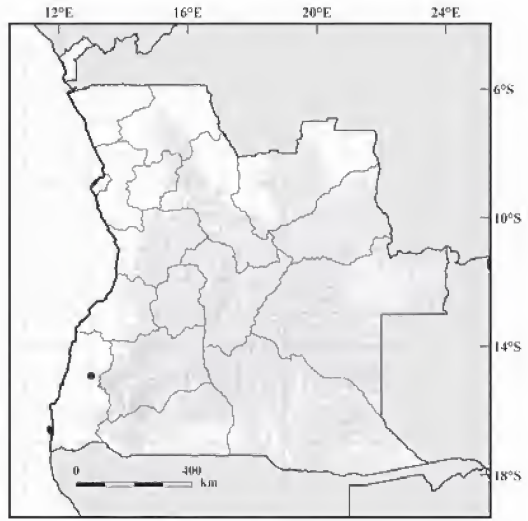
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southwestern Angola and Namibia as far south as Lüderitz.

Occurrences in Angola (Map 325): The species occurs in southwestern Angola, near the border between Cunene Province and Namibia. **Namibe:** “Munhino (101 km east of Mossamedes, via railroad)” [-14.91667, 13.00000] (Bogert 1940:94; Manaças 1981:21; Broadley 1990:281; Broadley and Baldwin 2006:167).

Taxonomic and distributional notes: Laurenti (1768) cited only a specimen figured by Seba (1735) for both *Natrix lubrica* as a whole and for his “Var. β .” although another form from Suriname was noted, so there must have originally been syntypes. The history of Seba’s collections have been discussed in detail (Engel 1937, 1961; Boeseman 1970; Juriev 1981, Adler 1989; Bauer 2002; Bauer and Günther 2013). Seba’s second collection (the first had been sold to Peter the Great of Russia in 1716; Driessen-van het Reve 2006) was sold after his death at auction (Anonymous

1752). Seba specimens are known or believed to be present in collections in St. Petersburg, London, Leiden (including specimens until recently in Amsterdam), Paris, Copenhagen, Stockholm, Bremen and Berlin (Boeseman 1970; Juriev 1981; Thireau et al. 1998; Bauer and Günther 2013) but few can be traced to particular plate figures, and the lectotype of *Natrix lubrica* is not among these. Wallach et al. (2014) cited no source for the designation of a lectotype, and indeed, no lectotype seems to have been formally designated previously, although most authors have only cited the African syntype (or Seba's figure) as type material, apparently unaware that the original description was based on more than one specimen. We interpret Wallach et al.'s use of the term lectotype as an intended lectotype designation, but as it lacks an express statement of deliberate designation (Art. 74.7.3) this designation is not valid, although it is appropriate, as the other specimen(s) implied are apparently referable to some other taxon, presumably from South America. Broadley and Baldwin (2006) referred *Aspidelaps lubricus infuscatus* Mertens, 1954, which had generally been recognized as the taxon occurring in northern Namibia, to the synonymy of *A. l. cowlesi*.



MAP 325. Distribution of *Aspidelaps lubricus cowlesi* in Angola.

Genus *Dendroaspis* Schlegel, 1848

Dendroaspis jamesoni (Traill, 1843)

JAMESON'S MAMBA

Elaps jamesoni Traill 1843:54. Holotype: NMSZ 1869.3.147, formerly TST and RSM (collector T.S. Traill family). Type locality: "Demerara, Equinoxial America" (Traill 1843:53) [= Guyana, South America], in error, restricted to "West Africa" by Mertens (1938b:49).

Dendroaspis Welwitschii Günther 1865b:97, pl. 2, fig. A. Holotype: BMNH:64.7.13.39 (collector F. Welwitsch). Type locality: "Golungo Alto", Kwanza Norte Province, Angola.

Dendroaspis neglectus Bocage 1888:141, fig. 4. Syntypes: MBL specimen numbers unknown (collector not stated), destroyed by fire 18 March 1978. Type locality: "L'Afrique occidentale de la Sénégambie à Angola (au nord du Quanza)", [= West Africa from Senegal and Gambia to Angola (north of Quanza)].

Dendroaspis Welwitschii: Bocage (1866a:51, 1888:143).

Dendroaspis neglectus: Bocage (1895a:138), Ferreira (1900a:53).

Dendroaspis jamesonii: Boulenger (1896:436, 1915:220), Parker (1936:126), Monard (1937b:137), Frade (1963:252), Spawls and Branch (1995:47).

Dendroaspis jamesoni jamesoni: Laurent (1950a:10, 1954a:61, 1964a:121), Hellmich (1957b:73), Thys van den Audenaerde (1966:36), Chirio and LeBreton (2007:570).

Dendroaspis jamesonii jamesonii (*Elaps jamesonii*): Manaças (1981:30).

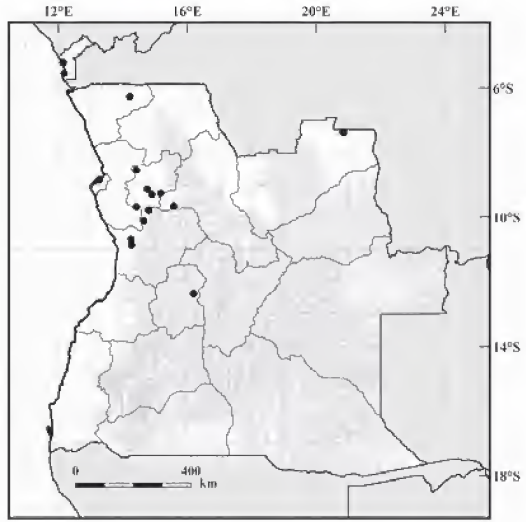
Dendroaspis jamesoni: Dobiey and Vogel (2007:42), Wallach et al. (2014:219), Vaz Pinto and Branch (2015:45).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Ghana eastwards to southern Sudan, South Sudan and southwestern Kenya (Kakamega) and south to northern and central Angola, the southern Democratic Republic of Congo, and possibly northern Zambia. Wallach et al. (2014) consid-

ered that records from Benin, Côte d'Ivoire and northern Zambia required confirmation.

Occurrences in Angola (Map 326): The species is known from north and central Angola. **Cabinda:** “Landana” [-5.21667, 12.15000] (Bocage 1895a:138); “Cabinda” [-5.55000, 12.18333] (Bocage 1895a:138; Manaças 1981:30). **Zaire:** “St. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:138; Manaças 1981:30). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:10, 1954a:61, 1964a:121; Thys van den Audenaerde 1966:36); “Dundo, barrage de la Luachimo” [-7.38333, 20.85000] (Thys van den Audenaerde 1966:36). **Luanda:** “Loanda” [-8.83333, 13.26667] (Ferreira 1900a:53). **Bengo:** “de Cacolo ao rio Bengo” (Ferreira 1900:53). **Malanje:** “Pungo-Andongo” [-9.66667, 15.58333] (Bocage 1895a:138). **Kwanza**



MAP 326. Distribution of *Dendroaspis jamesoni* in Angola.

Norte: “Piri-Dembos” [-8.53333, 14.43333] (Hellmich 1957b:73; Manaças 1981:30); “Golungo Alto (Golungo-alto, dans l'intérieur d'Angola, au nord du Quanza)” [-9.13333, 14.76667] (Günther 1865b:97; Bocage 1888:143; 1895a:138; Boulenger 1896:436; Monard 1937b:137, Manaças 1981:30); “Ambaca” [-9.26667, 15.18333] (Ferreira 1900a:53); “N'dalla Tando” [-9.30000, 14.91667] (Ferreira 1903:13; Manaças 1981:30); “Dondo” [-9.68333, 14.43333] (Manaças 1981:30). **Kwanza Sul:** “on a track between Kwanza bridge “Filomena da Câmara” and Farm Cabuta” [-9.78528, 14.81389] (*pers. comm.* Kelse Alexandre in Vaz Pinto and Branch 2015:45); “main road from Luanda to Huambo at Munenga, approximately 12 km south of the turning to Calulo” [-10.12083, 14.66500] (Vaz Pinto and Branch 2015:45); “Quirimbo” [-10.68333, 14.26667] (Parker 1936:126; Manaças 1981:30); “Congulu” [-10.86667, 14.28333] (Parker 1936:126; Manaças 1981:30). **Huambo:** “Bela Vista” [-12.36667, 16.20000] (Hellmich 1957b:73; Manaças 1981:30). **Undetermined Locality:** “Angola (au nord du Quanza)” (Bocage 1888:142).

Taxonomic and distributional notes: Hughes and Barry (1969) listed two syntypes (RSM 1869.3.147 and BMNH 1946.1.20.43) of *D. jamesoni*, but the original description specified a single type (see Wallach et al. 2014). Bocage (1895a) recognized two species of mambas in Angola, *Dendroaspis angusticeps* (Smith, 1849) and *Dendroaspis neglectus* (Bocage, 1888), the latter currently considered a junior synonym of *D. jamesoni*. The species *Dendroaspis angusticeps* has been restricted to East and Southern Africa, and Bocage's records assigned to this species in fact represent the Black Mamba, *Dendroaspis polylepis* Günther, 1864. In Angola, Spawls and Branch (1995) and Dobiey and Vogel (2007) considered *D. jamesoni* present only to the north of Luanda.

Dendroaspis polylepis (Günther, 1864)

BLACK MAMBA

Dendroaspis polylepis Günther 1864:310. Holotype: BMNH 1946.1.20.53 (formerly 64.6.28.15) (collector J. Kirk). Type locality: “regions bordering the Zambezi, including those of the Nyassa Lake” [= Zambesi River], Mozambique *vide* Loveridge (1953a:290).

Dendroaspis angusticeps?: Bocage (1866a:52).

Dendroaspis angusticeps: Peters (1877a:617, 1888:149), Bocage (1888:143, 1895a:140), Boulenger

(1915:220), Schmidt (1933:15), Monard (1937b:137), Bogert (1940:92), Frade (1963:253).

Dendroaspis polylepis polylepis: Loveridge (1957:294), FitzSimons (1962:310), Baynham (2010:25), Conradie et al. (2016:22).

Dendroaspis polylepis polylepis (*Dendroaspis polylepis*): Manaças (1981:30).

Dendroaspis polylepis: Håkansson and Madsen (1983:186), Broadley (1990:297), Spawls and Branch (1995:49), Broadley and Cotterill (2004:48), Chippaux (2006:235), Chirio and LeBreton (2007:572), Dobiey and Vogel (2007:44), Bates et al. (2014:398), Wallach et al. (2014:220), Branch and Conradie (2015:200), Ceríaco et al. (2016b:87).

Global conservation status (IUCN): Least Concern.

Global distribution: The species has an enormous range throughout the savannas of sub-Saharan Africa, occurring from Senegal eastwards to Sudan, Eritrea, Ethiopia and Somalia, then south to the Eastern Cape in South Africa, and west to Namibia and Angola, but absent from the equatorial forests of west and central Africa and from desert areas. Range in West Africa highly fragmented.

Occurrences in Angola (Map 327): The species mainly occurs in the west and central areas of Angola, however, it is also widely distributed in the eastern regions of the country. There are no published records from most coastal areas or from the Namib Desert. **Zaire:**

“Luanda Pil, approximately 6.5 km west of Soyo airport” [-6.155556, 12.26611] (Baynham 2010:25). **Lunda Norte:**

“Carumbo” [-7.74422, 19.95467] (Branch and Conradie 2015:200). **Malanje:**

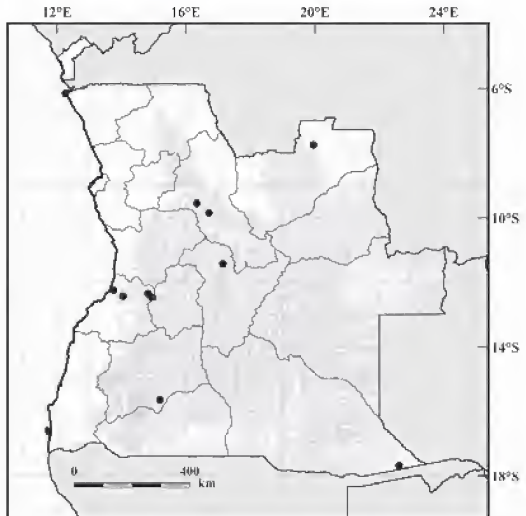
“Malanje” [-9.55000, 16.35000] (Peters 1881:149); “Cangandala National Park” [-9.84606, 16.72233] (Ceríaco et al. 2016b:87). **Bié:**

“Chitau” [-11.43333, 17.15000] (Schmidt 1933:15). **Benguela:**

“Quissange” [-12.43333, 14.05000] (Bocage 1888:143; Manaças 1981:30); “Quindumbo” [-12.46667, 14.93333] (Bocage 1888:143, 1895a:140; Monard 1937b:137; Manaças

1981:30); “Cahata” [-12.35000, 14.81667] (Bocage 1895a:140; Monard 1937b:137; Manaças 1981:30); “Hanha” [-12.25000, 13.75000] (Bogert 1940:92). **Huíla:** “Molundo” [-15.63333, 15.20000] (Schmidt 1933:15). **Cuando Cubango:** “Cuando basin (37)” (observation record) [-17.67833, 22.61475] (Conradie et al. 2016:9, 10, 22).

Taxonomic and distributional notes: For some time *Dendroaspis polylepis* (Günther, 1864) was wrongly identified as *Dendroaspis angusticeps* (Smith, 1849) in Angola (Bocage 1866a, 1888, 1895a; Peters 1877a, 1888; Boulenger 1915; Schmidt 1933; Bogert 1940; Frade 1963). This is clearly a misidentification, as *D. angusticeps* has a restricted distribution in Eastern southern Africa (Manaças 1981; Wallach et al. 2014). Branch and Conradie (2015) recently collected *D. polylepis* from Lake Carumbo, in Lunda Norte Province, the most eastern record of the species in Angola and Branch et al. (in Conradie et al. 2016) suggested that the species is likely more widely distributed in southern Angola than previously believed.



MAP 327. Distribution of *Dendroaspis polylepis* in Angola.

Genus *Elapsoidea* Bocage, 1866*Elapsoidea guentherii* Bocage, 1866

GÜNTHER'S GARTER SNAKE

Elapsoidea Güntherii Bocage 1866a:50, 1866b:70, pl. 1, figs. 3, 3a–3b. Lectotype: MBL T-130, formerly MBL 1935 (collector J.A. d'Anchieta), destroyed by fire 18 March 1978, designated by Parker (1949:97).

Type locality: restricted to “Cabinda” (Bocage 1866a:50, 1866b:70), Angola through the lectotype designation.

Elapsoidea Güntherii: Bocage (1873b:224).

Elapsoidea Güntheri: Bocage (1895a:129, 1897b:202).

Elapechis guentheri: Boulenger (1896:359).

Elapsoidea güntheri: Loveridge (1936a:41), Bogert (1940:86).

Elapsoidea sundevallii güntherii: Loveridge (1944c:222, 1957:290).

Elapsoidea sundevallii güntheri [part]: Parker (1949:93).

Elapsoidea güntheri güntheri: Laurent (1964a:117).

Elapsoidea sundevalli semiannulata: Haacke and Finkeldey (1967:3).

Elapsoidea guentheri: Broadley (1971e:600), Spawls and Branch (1995:60), Branch (1998:105)

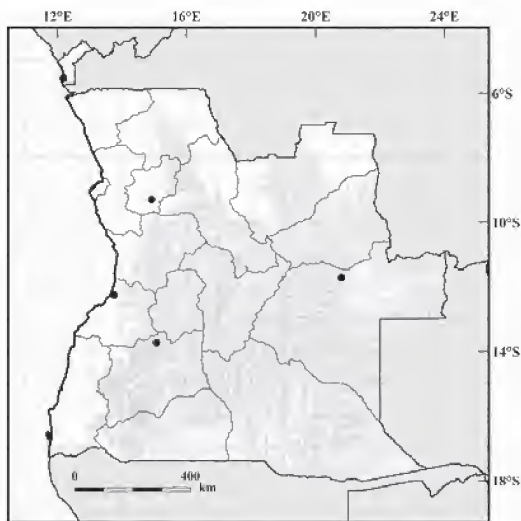
Elapsoidea guentheri (*Elapsoidea Güntherii*): Manaças (1891:22).

Elapsoidea guentherii: Chippaux (2006:216), Dobiey and Vogel (2007:49), Wallach et al. (2014:262).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species ranges from the lower Congo, south to Angola and east to the southern Democratic Republic of Congo, western Zambia and Zimbabwe.

Occurrences in Angola (Map 328): The species occurs from the northwest to the central plateaus of Angola. **Cabinda:** “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:59, 1866b:70, 1873b:224, 1895a:129, 1897b:202; Loveridge 1936a:41, 1944c:222, 1957:290; Parker 1949:95; Broadley 1971e:601; Manaças 1981:22; Chippaux 2006:216; Wallach et al. 2014:262). **Kwanza Norte:** “N'dala Tando” [-9.30000, 14.91667] (Broadley 1971e:601; Manaças 1981:22). **Moxico:** “Rives du lac Calundo (Lago Calundo)” [-11.71667, 20.80000] (Laurent 1964a:117; Broadley 1971e:601; Manaças 1981:22). **Benguela:** “with no precise identification but probably from Hanha” [-12.25000, 13.75000] (Bogert 1940:86; Broadley 1971e:601). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:129; Loveridge 1936a:41; Broadley 1971e:601; Manaças 1981:22).



MAP 328. Distribution of *Elapsoidea guentherii* in Angola.

Taxonomic and distributional notes: The species was described as new by Bocage in two different papers (1866a,b), both of which appeared in the November 1866 issue of the same journal. However, the generic name, although used in both papers, was actually defined and introduced as new only in the second paper. Haacke and Finkeldey (1967) regarded *E. semiannulata* Bocage, 1882 as the only member of the genus occurring in Angola and southern Congo. However, both *E. semiannulata* and *E. guentherii* are both present (e.g., Broadley 1971e; Manaças 1981; Spawls and Branch 1995; Chippaux 2006; Dobiey and Vogel 2007; Wallach et al. 2014).

Elapsoidea semiannulata semiannulata* Bocage, 1882*ANGOLAN GARTER SNAKE**

Elapsoidea semi-annulata Bocage 1882a:303. Holotype: MBL 1938 (collector J.A. d'Anchieta), destroyed by fire 18 March 1978. Type locality: "Caconda" Huíla Province, Angola.

Elapsoidea decosteri huilensis Laurent (1964a:118). Type: Holotype, MD 5552 (collector W. Kisker, coll. Prof. H. Baumann leg.). Type locality: "Fazenda Bumbo, Humpata (Huíla)," Huíla Povince, Angola.

Elapsoidea Guntherii: Bocage (1873b:224).

Elapsoidea Güntheri: Bocage (1895a:129; 1897b:202).

Elapsoidea güntheri var. *semiannulata*: Ferreira (1900a:52).

Elapsoidea güntheri: Schmidt (1933:14), Mertens (1938a:442).

Elapechis guentheri: Monard (1937b:137).

Elapsoidea sundevallii semiannulata: Loveridge (1936:41, 1944c:220).

Elapsoidea sundevallii güntheri [part]: Parker (1949:93).

Elapsoidea semiannulata: Broadley (1998b:15), Chippaux (2006:217), Dobiey and Vogel (2007:53), Wallach et al. (2014:236),

Elapsoidea ? sundevallii semiannulata: Hellmich (1957a:73).

Elapsoidea semiannulata semiannulata: Broadley (1971e:610, 1998b:15), Spawls and Branch (1995:64).

Elapsoidea semiannulata semiannulata (*Elapsoidea semi-annulata*): Manaças (1981:23).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The nominotypical subspecies is known from Angola, Zambia west of the Zambezi and northern Namibia.

Occurrences in Angola (Map 329): Widespread, with most records in the west of the country, but replaced in Cabinda and possibly elsewhere in the far north by *E. s. moebiusi*.

Luanda: "Loanda" [-8.83333, 13.26667] (Ferreira 1900a:52).

Bengo: "de Cacolo ao rio Bengo" (Ferreira 1900a:52).

Kwanza Norte: "Ambaca" [-9.26667, 15.18333] (Ferreira 1900a:52); "N'dalla Tando" [-9.30000, 14.91667] (Broadley 1971e:611; Manaças 1981:23).

Moxico: "Cazengo" [-9.33333, 14.76667] (Ferreira 1900a:52; Loveridge 1944c:221); "Vila Luso" [-11.78333, 19.91667] (Manaças 1981:23).

Bié: "Chitau" [-11.43333, 17.15000] (Schmidt 1933:14; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).

Huambo: "Galanga" [-12.06667, 15.15000] (Bocage 1895a:129, 1897b:202; Broadley 1971e:611; Manaças 1981:23); "Dondi" [-12.53333, 16.25000] (Loveridge 1944c:221; Broadley 1971b:611; Manaças 1981:23).

Benguela: "Entre Rios" [-13.01667, 14.63333] (Hellmich 1957a:73; Broadley 1971e:611; Manaças 1981:23); "Cubal" [-13.03333, 14.25000] (Mertens 1938a:442; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).

Huíla: "Kampulu (environs de Kasinga)" [-15.21667, 16.11667] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23); "Caconda" [-13.73333, 15.06667] (Bocage 1882b:303, 1895a:129; Loveridge 1936a:41; 1944c:221; Parker 1949:95; Broadley 1971e:611, 1998b:16; Manaças 1981:23; Chippaux 2006:217; Chirio and LeBreton 2007:576; Wallach et al. 2014:263); "Kalukembé" [-13.78333, 14.68333] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).

Huíla: "Kampulu (environs de Kasinga)" [-15.21667, 16.11667] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23); "Caconda" [-13.73333, 15.06667] (Bocage 1882b:303, 1895a:129; Loveridge 1936a:41; 1944c:221; Parker 1949:95; Broadley 1971e:611, 1998b:16; Manaças 1981:23; Chippaux 2006:217; Chirio and LeBreton 2007:576; Wallach et al. 2014:263); "Kalukembé" [-13.78333, 14.68333] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).

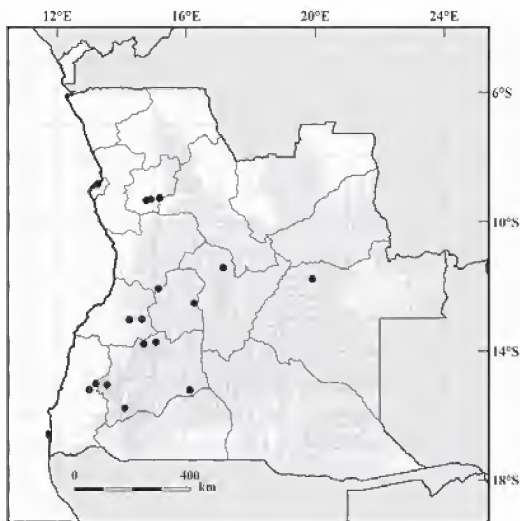
Benguela: "Entre Rios" [-13.01667, 14.63333] (Hellmich 1957a:73; Broadley 1971e:611; Manaças 1981:23); "Cubal" [-13.03333, 14.25000] (Mertens 1938a:442; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).

Huíla: "Kampulu (environs de Kasinga)" [-15.21667, 16.11667] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23); "Caconda" [-13.73333, 15.06667] (Bocage 1882b:303, 1895a:129; Loveridge 1936a:41; 1944c:221; Parker 1949:95; Broadley 1971e:611, 1998b:16; Manaças 1981:23; Chippaux 2006:217; Chirio and LeBreton 2007:576; Wallach et al. 2014:263); "Kalukembé" [-13.78333, 14.68333] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).

Huíla: "Kampulu (environs de Kasinga)" [-15.21667, 16.11667] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23); "Caconda" [-13.73333, 15.06667] (Bocage 1882b:303, 1895a:129; Loveridge 1936a:41; 1944c:221; Parker 1949:95; Broadley 1971e:611, 1998b:16; Manaças 1981:23; Chippaux 2006:217; Chirio and LeBreton 2007:576; Wallach et al. 2014:263); "Kalukembé" [-13.78333, 14.68333] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).

Benguela: "Entre Rios" [-13.01667, 14.63333] (Hellmich 1957a:73; Broadley 1971e:611; Manaças 1981:23); "Cubal" [-13.03333, 14.25000] (Mertens 1938a:442; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).

Huíla: "Kampulu (environs de Kasinga)" [-15.21667, 16.11667] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23); "Caconda" [-13.73333, 15.06667] (Bocage 1882b:303, 1895a:129; Loveridge 1936a:41; 1944c:221; Parker 1949:95; Broadley 1971e:611, 1998b:16; Manaças 1981:23; Chippaux 2006:217; Chirio and LeBreton 2007:576; Wallach et al. 2014:263); "Kalukembé" [-13.78333, 14.68333] (Monard 1937b:137; Loveridge 1944c:221; Broadley 1971e:611; Manaças 1981:23).



MAP 329. Distribution of *Elapsoidea semiannulata semiannulata* in Angola.

1981:23); “Huilla” [-15.05000, 13.55000] (Bocage 1873b:224, 1895a:129, 1897b:202; Broadley 1971e:611; Manaças 1981:23); “Fazenda Bumbo, Humpata” [-15.20000, 13.00000] (Laurent 1964a:118; Broadley 1971e:661; Manaças 1981:23); “Gambos” [-15.76667, 14.10000] (Bocage 1873a:224, 1895a:12, 1897a:202; Loveridge 1944c:221; Broadley 1971e:611, 1998b:16; Manaças 1981:23). **Namibe:** “Maconjo” [-15.01667, 13.20000] (Bocage 1895a:129, 1897c:202; Loveridge 1944c:221; Broadley 1971e:611, 1998b:16; Manaças 1981:23).

Taxonomic and distributional notes: The species was described by Bocage (1882a) as *Elapsoidea semi-annulata* based on two specimens from “Caconda” collected by J. Anchieta. Bocage (1895a) later changed the orthography to *Elapsoidea semiannulata*. Laurent (1964a) described a new subspecies from Angola, *Elapsoidea decosteri huilensis*, which currently is recognized as synonym of this taxon.

Elapsoidea semiannulata moebiusi (Werner, 1897)

MOEBIUS’ GARTER SNAKE

Elapechis moebiusi Werner 1897:400. Holotype: ZMB 13802 (collector J.N.F.J. Graf von Zech). Type locality: “Kete” [Kete, or Kete Krachi, was in the German colony of Togo at the time of the description, but after 1914 became part of the Gold Coast, and following independence in 1957, Ghana].

Elapsoidea semiannulata moebiusi: Broadley (1971e:609), Spawls and Branch (1995:64), Broadley (1998b:16).

Elapsoidea semiannulata moebiusi (*Elapechis moebiusi*): Manaças (1981:23).

Elapsoidea semiannulata: Trape and Mané (2006:190), Dobiey and Vogel (2007:53), Wallach et al. (2014:236).

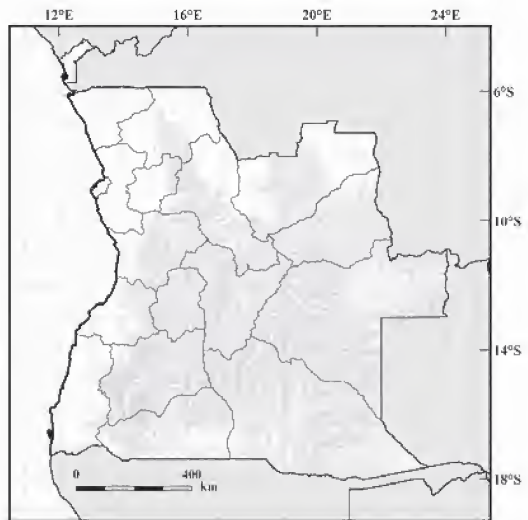
Elapsoidea semiannulata moebiusi: Chirio and LeBreton (2007:576).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The subspecies is known from Senegal and the extreme south of Mauritania, west to southern Chad, and the Central African Republic, and from disjunct populations south to western Congo, western and southwestern Democratic Republic of Congo, and far northern Angola.

Ocurrences in Angola (Map 330): *Elapsoidea. s. moebiusi* is known from northern regions including the Cabinda enclave. **Cabinda:** “Cabinda” [-5.55000, 12.18333] (Broadley 1998b:16, 18 [Fig.1]; Dobiey and Vogel 2007:53).

Taxonomic and distributional notes: Broadley (1971e, 1998b) Spawls and Branch (1995) and Dobiey and Vogel (2007) reorganized two subspecies for the country, the typical form *E. s. semiannulata* in more southern regions and *E. s. moebiusi* (Werner, 1897) in Cabinda or Cabinda and northern Zaire and Uige provinces. Chirio and LeBreton (2007) mistakenly noted “Caconda” as the type locality of *E. s. moebiusi*.



MAP 330. Distribution of *Elapsoidea semiannulata moebiusi* in Angola.

Genus *Naja* Laurenti, 1768***Naja anchietae* Bocage, 1879****ANCHIETA'S COBRA**

Naja Anchietae Bocage 1879a:98, 1879c:89. Lectotype: MBL 1987 (collectors H.C. Capello and R. Ivens), designated by Broadley (1995:31), destroyed by fire 18 March 1978. Type locality: "Caconda," Huíla Province, Angola.

Naja Anchietae: Bocage (1879c:98, 1895a:133, 1897a:202).

Naja anchietae: Ferreira (1900ab:134), Monard (1937b:138), Bogert (1940:90), Frade (1963:252), Broadley (1968c:7), Broadley and Cotterill (2004:47), Broadley and Wüster (2004:101), Dobiey and Vogel (2007:63), Ceríaco et al. (2014b:671), Ceríaco et al. (2016b:87).

Naja haje anchietae: Mertens (1937:23), Bogert (1940:90), Laurent (1964a:118), Manaças (1981:26), Broadley (1966c:23), Spawls and Branch (1995:70), Trape et al. (2009:20).

Naja anulifera anchietae: Broadley (1995:31).

Naja (Uraeus) anchietae: Wallach et al. (2009:31).

Uraeus anchietae: Wallach et al. (2014:762).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from western parts of southern Africa, from Angola and northern Namibia through western Zambia and northern Botswana to northwestern Zimbabwe and Lake Bangweulu, northeastern Zambia.

Ocurrences in Angola (Map 331): The

species occurs in mostly in the southern Angola however, there are some records from more northern provinces. **Lunda Sul:** "Alto Cuílo" [-10.01667, 19.55000] (Laurent 1964a:118, Manaças 1981:26); "Alto Chicapa" [-10.93333, 19.15000] (Laurent 1964a:118, Manaças 1981:26). **Malanje:** "Capanda" [-9.72841, 15.34585] (Ceríaco et al. 2014b:671); "Cangandala National Park" [-9.84606, 16.72233] (Ceríaco et al. 2016b:87).

Benguela: "Hanha" [-13.30000, 14.20000] (Ferreira 1900b:134; Manaças 1981:26).

Huíla: "Caconda" [-13.73333, 15.06667] (Bocage 1879a:98, 1879c:89, 1895a:133, 1897a:202; Ferreira 1900b:134; Manaças 1981:26; Broadley 1995:31); "Kalukembé" [-13.78333, 14.68333] (Monard 1937b:138; Manaças 1981:26); "Vila da Ponte" [-14.46667, 16.30000] (Manaças 1981:26); "Kuvangu" [-14.46667, 16.30000] (Monard 1937b:138; Manaças 1981:26); "Capelongo" [-14.91667, 15.08333] (Bogert 1940:90; Manaças 1981:26); "Huilla" [-15.05000, 13.55000] (Bocage 1895a:133, 1897a:202; Ferreira 1900b:134; Manaças 1981:26); "vu l'espèce dans la région du Kuluï supérieur" [-15.41667, 15.73333] (Monard 1937b:138). **Cunene:** "Mupa" [-16.18333, 15.75000] (Monard 1937b:138; Manaças 1981:26); "Humbe" [-16.68333, 14.90000] (Bocage 1895a:133, 1897a:202; Ferreira 1900b:134; Manaças 1981:26). **Undetermined Locality:** "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

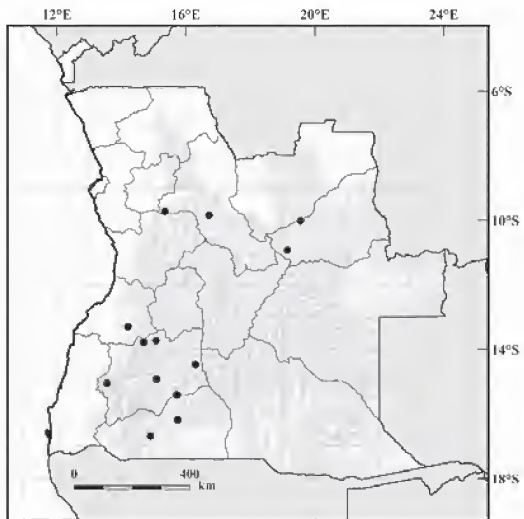
Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).

Undetermined Locality: "Rio Cuando" (Bocage 1895a:133, 1897a:202; Manaças 1981:26).



MAP 331. Distribution of *Naja anchietae* in Angola.

Taxonomic and distributional notes: Wallach et al. (2014) attributed the lectotypoe designation for *Naja anchietae* to Broadley and Wallach (2004), however, Broadley (1995) had already referred to MBL 1987 as the lectotype a decade earlier. Mertens (1937a), Bogert (1940) and subse-

quent authors treated *Naja anchietae* as a subspecies of *Naja haje* (Linnaeus, 1758), until Broadley (1995) included it as a subspecies of *Naja annulifera* Peters, 1854. Recent studies suggest that these two *taxa* are morphologically and genetically distinct evolutionary lineages that should be considered as two separate species (Broadley and Wüster 2004). Wallach et al. (2009) assigned the non-spitting African cobras to the subgenus *Uraeus* Wagler, 1830 and subsequently treated *Uraeus* as a full genus (Wallach et al. 2014). Most literature has considered *N. anchietae* to be restricted in Angola to the south (e.g., Broadley 1966c, 1968c, 1995; Spawls and Branch 1995; Broadley and Wüster 2004; Broadley and Cotterill 2004; Dobiey and Vogel 2007; Trape et al. 2009:20; Wallach et al. 2014) but there are now numerous records from more northerly areas (Laurent 1964a; Manaças 1981; Ceriaco et al. 2014b, 2016b).

Naja annulata Buchholz and Peters, 1876

RINGED WATER COBRA

Naja annulata Buchholz and Peters 1876 in Peters 1876:119. Holotype: ZMB 8772 (collector R. Buchholz).

Type locality: “Dorfe Mbusu (Eliva Sonangeam am Ogowe)” [= Eliva Sonange, near Ogooué-Maritime], Gabon.

Boulengerina annulata: Spawls and Branch (1995:55), Broadley et al. (2003:106), Nagy et al. (2005:224), Wüster et al. (2007:445), Wallach et al. (2014:119).

Boulengerina annulata annulata: Dobiey and Vogel (2007:37).

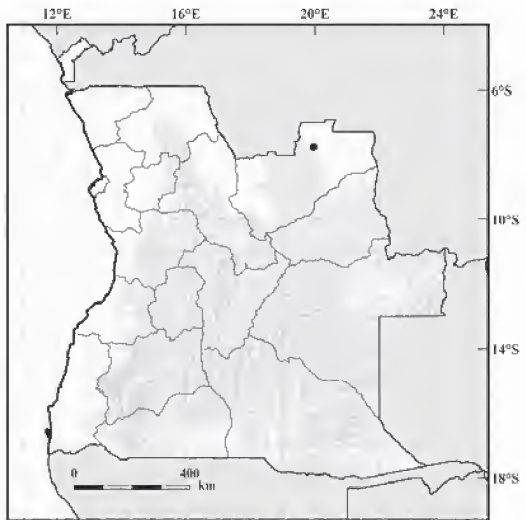
Naja (Boulengerina) annulata: Wallach et al. (2009:31), Branch and Conradie (2015:200).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The the nominate subspecies is known from southern Cameroon to the southern Central African Republic and throughout the northern and central portions of the Democratic Republic of Congo. It extends southwards through People’s Republic of Congo, Gabon and Equatorial Guinea, and reaches Angola along the lower Zaire River. The subspecies *N. a. stormsi* (Dollo, 1886) occurs extralimitally in the areas around Lake Tanganyika and Lake Kivu.

Ocurrences in Angola (Map 332): The species presumably occurs in the Cabinda enclave and in the northernmost portions of the country. **Lunda Norte:** “Along the edge of the Luele River, near the base camp, 5 km from the Carumbo Lagoon” [-7.75294, 19.95672] (Branch and Conradie 2015:200).

Taxonomic and distributional notes: Water cobras (*Boulengerina*) have long been known to make *Naja* paraphyletic (Slowinski and Keogh 2000, Nagy et al. 2005, Wüster et al. 2007, Wallach et al. 2009). Wüster et al. (2007) recovered the species *Paranaja multifasciata* (Werner, 1902) as the sister taxon of *Boulengerina annulata* (Buchholz and Peters, 1876) and *Naja melanoleuca* Hallowell, 1857 and noted that the three constitute a clade of primarily forest inhabiting cobras. Wüster et al.



MAP 332. Distribution of *Naja annulata* in Angola.

(2007), therefore, considered both *Boulengerina* and *Paranaja* as synonyms of *Naja*. Wallach et al. (2009) recognized this clade as the subgenus *Boulengerina* Dollo, 1886, whereas Wallach et al. (2014) treated this group as generically distinct. Spawls and Branch (1995) and Dobiey and Vogel (2007) both suggested that the species probably occurs in Cabinda and in the Zaire region of north-

west Angola. A subadult *Naja annulata* from Lunda Norte Province (Branch and Conradie 2015), is the first vouchered record for the country.

***Naja melanoleuca* Hallowell, 1857**

FOREST COBRA

Naja haje (var. *melanoleuca*) Hallowell 1857:61. Syntypes: ANSP 6875–78 (collector H. A. Ford). Type locality: “Gaboon country, West Africa” [= Gabon].

Naja haje: Bocage (1866a:51, 1895a:132), Peters (1877a:618).

Naja haje haje: Loveridge (1957:291).

Naja melanoleuca: Boettger (1898:120), Boulenger (1905:114, 1915:219), Ferreira (1900b:133, 1903:12), Parker (1936:126), Bogert (1940:87), Laurent (1950a:10, 1954a:60), Hellmich (1957b:72), FitzSimons (1962:300), Broadley (1968c:5), Manaças (1981:27), Broadley (1990:291), Spawls and Branch (1995:71), Branch (1998:107), Broadley and Cotterill (2004:47), Chippaux (2006:225), Trapé and Mané (2006:198), Dobiey and Vogel (2007:69), Bates et al. (2014:404), Wallach et al. (2014:120), Ceriaco et al. (2017:141).

Naja melanoleuca melanoleuca: Laurent (1964a:120), Thys van den Audenaerde (1966:35), Chirio and LeBreton (2007:582).

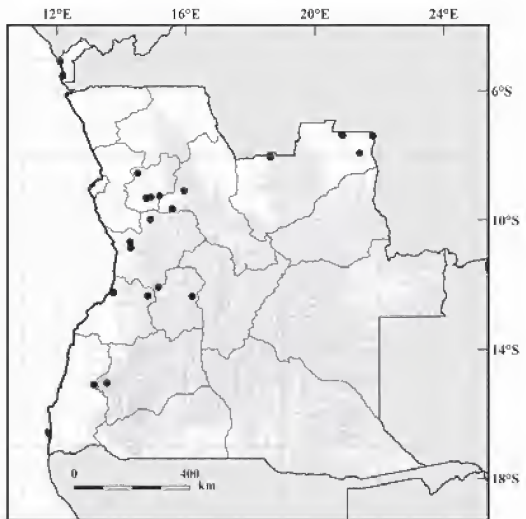
Naja (*Boulengerina*) *melanoleuca*: Wallach et al. (2009:31).

Boulengerina melanoleuca: Wallach et al. (2014:120).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The *N. melanoleuca* species complex is known from forest and savanna through west, central and east Africa, from Senegal east to western Ethiopia, southern Somalia, south to Angola on the west coast and KwaZulu-Natal, South Africa on the east coast. Populations in the east of the range are partly disjunct. With the recent elevation of *N. subfulva* to specific status (Ceriaco et al. 2017), the global distribution of *N. melanoleuca* will need to be reevaluated.

Occurrences in Angola (Map 333): The species occurs from the northeast of the country, including areas adjacent with Zambia in Moxico Province (pers. obs.) to the northwest, including Cabinda, and throughout western Angola, exclusive of arid regions. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Bocage 1866a:51; Ferreira 1900b:133; Manaças 1981:27); “Cabinda” [-5.55000, 12.18333] (Peters 1877a:618; Bocage 1895a:132, Boettger 1898:120). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:10, 1954a:60, 1964a:120; Thys van den Audenaerde 1966:35; Manaças 1981:27); “Dundo, R. Capemba” (Thys van den Audenaerde 1966:35); “Dundo, Barrage de la Luachimo” [-7.38333, 20.85000] (Thys van den Audenaerde 1966:35); “Dundo, Cacanda” [-7.40000, 21.80000] (Thys van den Audenaerde 1966:35); “Cossa” [-7.93333, 21.38333] (Thys van den Audenaerde 1966:35); “R. Camaiala” [-8.05000, 18.61667] (Thys van den Audenaerde 1966:35). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:51, 1895a:132; Ferreira 1900b:133; Manaças 1981:27); “Pungo-Andongo” [-9.66667, 15.58333] (Boulenger 1905:114; Manaças 1981:27). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:72; Manaças 1981:27; Ceriaco et al. 2017:141); “Ambaca” [-9.26667, 15.18333] (Manaças 1981:27);



MAP 333. Distribution of *Naja melanoleuca* in Angola.

“N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1903:12; Manaças 1981:27); “Cazengo” [-9.33333, 14.76667] (Manaças 1981:27). **Kwanza Sul**: “Libolo-Luati” [-9.98333, 14.90000] (Hellmich 1957b:72; Manaças 1981:27; Ceríaco et al. 2017); “Quirimbo” [-10.68333, 14.26667] (Parker 1936:126; Manaças 1981:27); “Congulu” [-10.86667, 14.28333] (Parker 1936:126; Manaças 1981:27). **Huambo**: “Galanga” [-12.06667, 15.15000] (Bocage 1895a:132). **Benguela**: “Cahata” [-12.35000, 14.81667] (Bocage 1895a:132; Ferreira 1900b:133; Manaças 1981:27); “Hanha” [-12.25000, 13.75000] (Bogert 1940:87; Manaças 1981:27). **Huila**: “Sanguengue” [-12.36667, 16.20000] (Hellmich 1957b:72); “Huilla” [-15.05000, 13.55000] (Ferreira 1900b:133; Manaças 1981:27). **Namibe**: “Capangombe” [-15.10000, 13.15000] (Ferreira 1900b:133; Manaças 1981:27).

Taxonomic and distributional notes: Broadley and Cotterill (2004) referred to *Naja melanoleuca* as a “species complex” that might contain several cryptic species. It was being reviewed by Broadley et al. at the time of the senior author’s death. Wallach et al. (2009) assigned *Naja melanoleuca* to the subgenus *Boulengerina* and later (Wallach et al. 2014) treated *Boulengerina* as generically distinct. Although Spawls and Branch (1995) and Dobiey and Vogel (2007) considered *N. melanoleuca* to be restricted to northern Angola, including the Cabinda enclave, it is much more widely spread throughout the country. Ceríaco et al. (2017) presented molecular evidence to support *Naja subfulva* Laurent, 1955, as a valid species and not a mere “savannah form” or subspecies of *N. melanoleuca* as considered by many previous authors. The two species are easily told apart by a combination of morphological characters and coloration, but to separate the Angolan records, many of them from before the original description of *subfulva*, will require a detailed review of all available specimens. Despite *N. melanoleuca* being considered more of a forest dweller and *subfulva* a savannah species, they are sympatric in parts of Angola (LMPC pers. obs.), frustrating attempts to infer the identity of records based solely on distribution.

Naja mossambica Peters, 1854

MOZAMBIQUE SPITTING COBRA

N[aja]. mossambica Peters 1854:625. Lectotype: ZMB 2811 (collector W.C.H. Peters), designated by Golay et al. (1993:188). Type locality: “Tette and Sena” [= Tete, Vila de Sena], Mozambique, restricted to “Tette” as a result of lectotype designation.

Naja mossambica mossambica: Manaças (1981:28).

Naja mossambica: Broadley (1966c:25, 1974:156), Broadley (1990:295), Spawls and Branch (1995:74), Broadley and Cotterill (2004:47), Dobiey and Vogel (2007:71), Würster et al. (2007:438)

Naja mossambica mossambica: Manaças (1981:28).

Naja (Afronaja) mossambica: Wallach et al. (2009:32), Conradie et al. (2016:22).

Afronaja mossambica: Wallach et al. (2014:10).

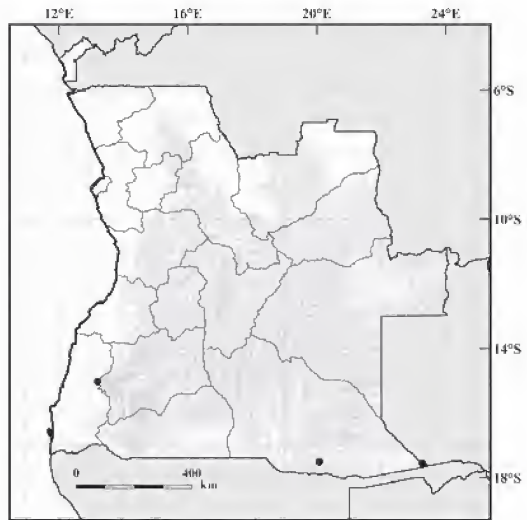
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widespread in eastern and southern Africa, occurring from southern Tanzania southwestwards to extreme southeastern Angola, northern Namibia and Botswana, and southwards to eastern South Africa and Swaziland.

Occurrences in Angola (Map 334): The species occurs in the extreme southeastern regions of Cuando Cubango Province and there is an isolated record in Namibe Province. **Namibe**: “Maconjo” [-15.01667, 13.20000] (Broadley 1974:156; Manaças 1981:28). **Cuando Cubango**: “Cuito basin (30a)” [-17.50875, 20.06594] (Conradie et al. 2016:9, 10, 22); “Cuando basin (44b)” [-17.56916, 23.27305] (Conradie et al. 2016:9, 10, 22).

Taxonomic and distributional notes: Dobiey and Vogel’s (2007) distribution map shows that the Mozambique Spitting Cobra in Angola is restricted to the extreme southeastern regions of Cuando Cubango Province, near the Zambian and Namibian borders. However, Broadley (1974,

1990) reported a record from “Maconjo” that represents an isolated western Angolan locality, where it is sympatric with *Naja* (*Afronaja*) *nigricincta* Bogert, 1940. Wallach et al. (2009) proposed nomenclatural changes regarding the genus *Naja*: the subgeneric name *Naja* is applicable to the Asiatic cobras, whereas African spitting cobras, including *N. mossambica*, were placed in a new subgenus, *Afronaja* Wallach, Wüster and Broadley, 2009. Wallach et al. (2014) used *Afronaja* at the generic rank.



MAP 334. Distribution of *Naja mossambica* in Angola.

Naja multifasciata Werner, 1902

MANY-BANDED COBRA

Naia multifasciata Werner 1902:347. Holotype: IRSNB 2015 (collector L. Rom). Type locality: “der oberen Maringa” [= Upper Maringa River, Tshuapa], Democratic Republic of Congo.

Paranaja multifasciata: Spawls and Branch (1995:82), Nagy et al. (2005:224), Dobiey and Vogel (2007:80), Wüster et al. (2007:445).

Naja (*Boulengerina*) *multifasciata*: Wallach et al. (2009:31).

Boulengerina multifasciata: Wallach et al. (2014:121).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Cameroon to Congo.

Ocurrences in Angola: The species is expected to occur in the Cabinda enclave and potentially Zaire Province in northwestern Angola (Spawls and Branch 1995; Dobiey and Vogel 2007) but there are no vouchered records.

Taxonomic and distributional notes: Wüster et al. (2007) recovered the species *Paranaja multifasciata* (Werner, 1902) as the sister taxon to *Boulengerina annulata* (Buchholz and Peters, 1876) plus *Naja melanoleuca* Hallowell, 1857 and they considered both *Paranaja* and *Boulengerina* as synonyms of *Naja*. Although long placed in the monotypic genus *Paranaja*, Wallach et al. (2009), based on phylogenetic information, assigned *Naja multifasciata* to the subgenus *Boulengerina* and later (Wallach et al. 2014) treated *Boulengerina* as generically distinct.

Naja nigricincta Bogert, 1940

WESTERN BARRED SPITTING COBRA

Naja nigricollis var. *fasciata* Bocage 1895a:136. Lectotype: MBL 1968 (collector A.P. De Carvalho), destroyed by fire 18 March 1978, designated by Broadley (1974:158). Type locality: “Benguella ... Dondo ... Capangombe,” Angola, restricted to “Benguella” through lectotype designation. Preoccupied by *Naja fasciata* Laurenti, 1768, syn. *Naja naja* (Linnaeus, 1758).

Naja nigricollis nigricinctus Bogert 1940:89, pl. 1, fig. 1. Holotype: AMNH 51823 (collector A.S. Vernay, H. Lang and R. Boulton). Type locality: “Muninho (101 km east of Mossamedes via railroad),” Namibe Province, Angola.

Naja nigricollis: Bocage (1866a:51, 1866b:71, 1867b:228), Ferreria (1900b:134), Monard (1937b:136-137).

Naja nigricollis nigricinctus: FitzSimons (1962:303).

Naja mossambica nigricincta: FitzSimons (1962:306), Manaças (1981:28).

Naja nigricincta: Broadley (1966c:25), Würster et al. (2007:445).

Naja nigricollis nigricincta: Broadley (1968c:7), Spawls and Branch (1995:78).

Naja nigricincta nigricincta: Broadley (1974:158, 1990:294), Dobiey and Vogel (2007:72).

Naja (Afronaja) nigricincta: Wallach et al. (2009:32).

Afronaja nigricincta: Wallach et al. (2014:10).

Global conservation status (IUCN): Not Evaluated.

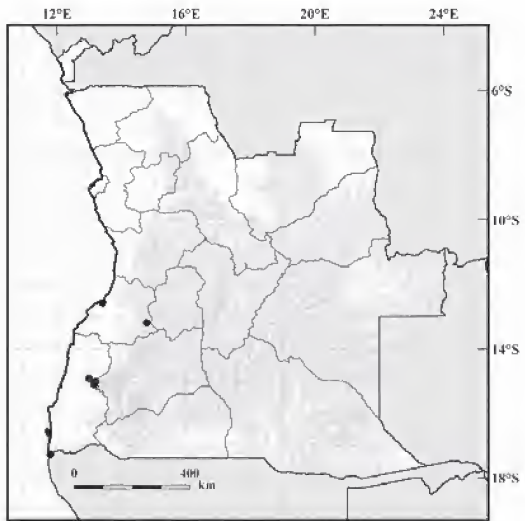
Global distribution: The nominate form of the species is known from southwestern Angola and central and northern Namibia. *Naja nigricincta woodi* Pringle, 1955 is extralimital, occurring in southern Namibia and western South Africa.

Ocurrences in Angola (Map 335): The species is known from southwestern Angola.

Benguela: “Benguela” [-12.58333, 13.41667] (Bocage 1866a:51, 1866b:71, 1867b:228, 1895a:136; Monard 1937b:136; Broadley 1974:158; Manaças 1981:28); “Rio Equimina” [-13.20000, 14.78333] (Broadley 1974:158; Manaças 1981:28). **Namibe:** “Munhino” [-14.91667, 13.00000] (Bogert 1940:89; FitzSimons 1962:306; Broadley 1968c:7, 1974:158, 1990:294; Manaças 1981:28; Wallach et al. 2014:10); “Maconjo” [-15.01667, 13.20000] (Broadley 1974:158; Manaças 1981:28); “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:136); “Foz do Cune-ne” [-17.28333, 11.80000] (Broadley 1974:158; Manaças 1981:28).

Taxonomic and distributional notes:

Bocage (1895a) recognized several varieties of *Naja nigricollis* Reinhardt, 1843 based on coloration (var. *occidentalis*; var. *melanoleuca*; var. *fasciata*). *Naja nigricollis nigricinctus* Bogert, 1940 is a synonym of Bocage’s (1895a) var. *fasciata*, but since the older name was preoccupied by *Naja fasciata* Laurenti (1768), a synonym of *Naja naja* (Linnaeus, 1758), Broadley (1966c) accepted Bogert’s (1940) as the valid name of this species, treating it as a subspecies of *N. nigricollis*. Years later he treated this form as a subspecies of *N. mossambica* Peters, 1854 (Broadley 1968c, 1974). Bocage had recorded *N. n.* var. *fasciata* from “Dondo,” however Broadley (1974) examined the Museu Bocage specimens and only found one specimen from that locality, which he nominated as the lectotype of *Naja nigricollis* var. *occidentalis* (Bocage 1895a) (= *Naja nigricollis* Reinhardt, 1843) whereas the *N. nigricollis* var. *fasciata* specimens were from “Benguela” and “Maconjo,” Spawls and Branch (1995) still recognized *nigricincta* as a subspecies of *nigricollis*, whereas Würster et al. (2007) treated it as a separate evolutionary species, with *N. n. woodi* as a subspecies.



MAP 335. Distribution of *Naja nigricincta* in Angola.

Naja nigricollis Reinhardt, 1843

BLACK-NECKED SPITTING COBRA

Naja nigricollis Reinhardt 1843:269, pl. 3, figs. 5–7. Lectotype: ZMUC 65204 (collector J.R. Chenon) designated by F. W. Braestrup in Hughes and Barry (1969:1027). Type locality: “Guineakysten” (Reinhardt 1843:271) [= coast of Ghana *fide* Hughes and Barry (1969:1027)], probably near “Christiansborg Castle, now a suburb of Accra,” [Ghana], where the collector was stationed (Rasmussen and Hughes 1997:15).

Naja nigricollis var. *occidentalis* Bocage 1895a:135. Lectotype: MBL 1963 (collector F.A.P. Bayão), destroyed by fire 18 March 1978, designated by Broadley (1974:156). Type locality: “Dondo ... Quissange, Quillengues, Huilla et Humbe [Angola] ... Bissau [Guinea-Bissau],” restricted to “Dondo” [= Sumbe] Kwanza Norte Province, Angola through the designation of the lectotype.

Naja nigricollis var. *melanoleuca* Bocage 1895a:136 (non Hallowell, 1857). Lectotype: MBL 1972 (collector J.A. d’Anchieta), destroyed by fire 18 March 1978, designated by Broadley (1974:156). Type locality: “Catumbella et ... Caconda” restricted to “Caconda,” Angola through the designation of the lectotype.

Naja nigricollis: Bocage (1867b:228, 1896a:113), Peters (1881:149), Boettger (1898:120), Ferreria (1900b:134), Boulenger (1905:114), Schmidt (1933:14), Monard (1937b:136-137), Broadley (1966c:25), Manaças (1981:28), Spawls and Branch (1995:78), Dobiey and Vogel (2007:74), Wüerst et al. (2007:438).

Naia nigricollis: Boulenger (1896:378).

Naja nigricollis nigricollis: Mertens (1938a:442), Laurent (1950a:10, 1954a:60), Hellmich (1957a:74, 1957b:73), Loveridge (1957:292), FitzSimons (1962:302), Broadley (1974:156, 1990:292).

Naja nigricollis occidentalis: Laurent (1964a:119), Thys van den Audenaerde (1966:35), Broadley (1968c:7).

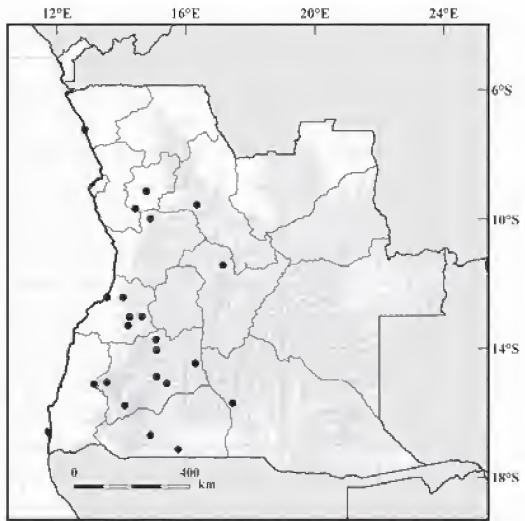
Naja (Afronaja) nigricollis: Wallach et al. (2009:32).

Afronaja nigricollis: Wallach et al. (2014:10).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widely distributed from southern Mauritania and Senegal east to Ethiopia and Somalia, and south to Zambia, Malawi, the southern Democratic Republic of Congo, and Angola. Absent from the forests of Central and West Africa, with disjunct populations along the lower Congo River, in southwestern Angola and elsewhere.

Ocurrences in Angola (Map 336): The species very widespread, from coastal areas to the interior highlands of Angola. **Zaire:** “Ambrizette” [-7.23333, 12.86667] (Bocage 1895a:135; Boettger 1898:120; Manaças 1981:28). **Malanje:** “Malanje” [-9.55000, 16.35000] (Peters 1881:149; Bocage 1895a:135; Manaças 1981:28). **Kwanza Norte:** “Golungo Alto” [-9.13333, 14.76667] (Boulenger 1905:114; Monard 1937b:136); “Dondo” [-9.68333, 14.43333] (Bocage 1895a:135; Ferreira 1900b:134; Monard 1937b:136; Loveridge 1957:292; Hellmich 1957b:73; Broadley 1968c:7; Manaças 1981:28). **Kwanza Sul:** “Libolo-Luati” [-9.98333, 14.90000] (Hellmich 1957b:73; Manaças 1981:28); “Dondo a Humbe” (Ferreira 1900b:134). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:14). **Benguela:** “Catumbella” [-12.43333, 13.55000] (Bocage 1867b:228, 1895a:135; Ferreira 1900b:134; Manaças 1981:28); “Quissange” [-12.43333, 14.05000] (Bocage 1895a:135; Ferreira 1900b:134; Monard 1937b:136; Loveridge 1957:292; Broadley 1968c:7; Manaças 1981:28); “Chivitidi/Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:74; Manaças 1981:28); “Cubal” [-13.03333, 14.25000] Mertens 1938:442; Manaças 1981:28); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:113; Manaças 1981:28). **Huila:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:135; Ferreira 1900b:134; Monard 1937b:136; Manaças 1981:28); “Quillengues” [-14.06667, 15.08333] (Bocage 1895a:135; Monard 1937b:136; Loveridge 1957:292; Broadley 1968c:7; Manaças 1981:28); “Kuvangu/Kubangu/Vila da Ponte”



MAP 336. Distribution of *Naja nigricollis* in Angola.

[-14.46667, 16.30000] (Monard 1937b:136-137; Manaças 1981:28); “Capelongo” [-14.88333, 15.08333] (Manaças 1981:28); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:135; Monard 1937b:136; Loveridge 1957:292; Broadley 1968c:7; Manaças 1981:28); “Osi” [-15.08333, 15.40000] (Monard 1937b:136-137; Manaças 1981:28); “Gambos” [-15.76667, 14.10000] (Manaças 1981:28). **Namibe:** “Capangombe” [-15.10000, 13.15000] (Ferreira 1900b:134; Monard 1937b:136; Manaças 1981:28). **Cunene:** “Humbe” [-16.68333, 14.90000] (Bocage 1895a:135; Ferreira 1900b:134; Monard 1937b:136; Loveridge 1957:292; Broadley 1968c:7; Manaças 1981:28); “Mupanda” [-17.13333, 15.76667] (Monard 1937b:136-137; Manaças 1981:28). **Cuan-do Cubango:** “Kayundu” [-15.70000, 17.45000] (Monard 1937b:136-137; Manaças 1981:28).

Taxonomic and distributional notes: Bocage’s (1895a) locality of “Ambrizette” in Zaire Province has been considered questionable and has been excluded from some distribution maps for the species (Spawls and Branch 1995; Dobiey and Vogel 2007). However, Dobiey and Vogel (2007) do include Cabinda within the range of the species, although we are not aware of any published records. These authors also indicate occurrence in northcentral Namibia, although only a single specimen, from Katima Mulilo in the eastern Caprivi Strip has been documented from that country (Broadley 1974). The taxonomy of *N. nigricollis* still requires further study (Wüster et al. 2007). Wallach et al. (2009) placed the African spitting cobras in a new subgenus, *Afronaja* Wallach, Wüster and Broadley, 2009, with *Naja nigricollis* as the type species and Wallach et al. (2014) have treated this as a full genus.

Naja subfulva Laurent, 1955

SAVANNA COBRA

Naja melanoleuca subfulva Laurent 1955:61. Holotype: MRAC 17514 (collector Van der Borgh). Type locality: “Lwiro, 1850 m, Terr. de Kabare, Kivu,” Democratic Republic of the Congo.

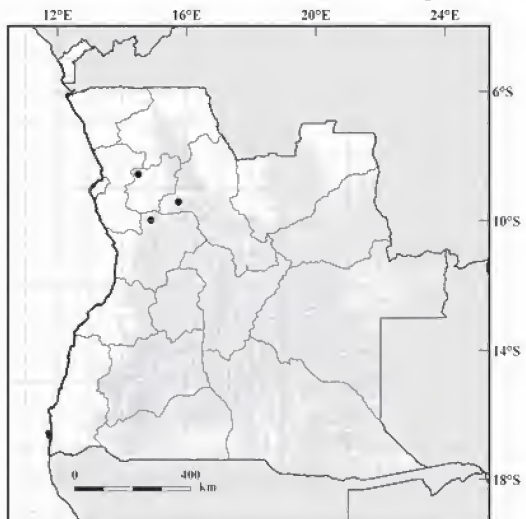
Naja subfulva: Ceriaco et al. (2017:141).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The *N. melanoleuca* species complex is known from forest and savanna through west, central, and east Africa, from Senegal east to western Ethiopia, southern Somalia, south to Angola on the west coast and KwaZulu-Natal, South Africa on the east coast. Populations in the east of the range are partly disjunct. With the recent elevation of *N. subfulva* to specific status (Ceriaco et al. 2017), the global distribution of both this taxon and *N. melanoleuca sensu stricto* will need to be reevaluated.

Occurrences in Angola (Map 337): The species should occur across the country, except in the more heavily forested areas in the north, but currently the only confirmed records are for Kwanza Norte, Kwanza Sul and Malanje provinces. **Malanje:** “Cacuso” [-9.421023, 15.746679] (Ceriaco et al. 2017:141). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Ceriaco et al. 2017:141). **Kwanza Sul:** “Libolo-Luati” [-9.98333, 14.90000] (Ceriaco et al. 2017:141).

Taxonomic and distributional notes: See *Naja melanoleuca* account.



MAP 337. Distribution of *Naja subfulva* in Angola.

Genus *Pseudohaje* Günther, 1858***Pseudohaje goldii* (Boulenger, 1895)****AFRICAN TREE COBRA**

Naia Goldii Boulenger 1895d:34. Holotype: BMNH 1946.1.21.43 (formerly BMNH 1895.5.3.53) (collector W.H. Crosse). Type locality: "Territories of the Royal Niger Company, near Asaba, about 150 miles up the Niger" (Boulenger 1895d:32-33) [= vicinity of Asaba, Niger River], southern Nigeria.

Naia goldii: Boulenger (1915:219).

Naja goldii: Parker (1936:126).

Pseudohaje goldii: Bogert (1942:7), Laurent (1950a:10, 1954a:61), Hellmich (1957b:73), Spawls and Branch (1995:84), Spawls et al. (2004:460), Chippaux (2006:230), Chirio and LeBreton (2007:590), Dobiey and Vogel (2007:81), Wallach et al. (2014:591).

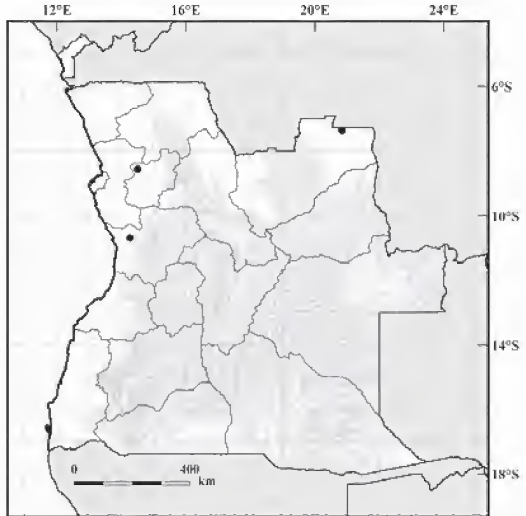
Pseudohaje goldii (*Naia goldii*): Manaças (1981:28).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from west and central African forests, from Nigeria in the northwest, eastward through Cameroon and the Democratic Republic of Congo to Uganda, western Kenya, and possibly Rwanda (Spawls et al. 2004) and southward to northern Angola. Isolated populations in the Côte d'Ivoire and Ghana and possibly Togo (Segniagbeto et al. 2011).

Occurrences in Angola (Map 338): The species occurs in the northern Angola. **Lunda Norte:** "Dundo" [-7.36667, 20.83333] (Laurent 1950a:10, 1954a:61; Manaças 1981:28). **Kwanza Norte:** "Piri-Dembos" [-8.56667, 14.50000] (Hellmich 1957b:73; Manaças 1981:28). **Kwanza Sul:** "Quirimbo" [-10.68333, 14.26667] (Parker 1936:126; Manaças 1981:28).

Taxonomic and distributional notes: Bogert (1942) reviewed the Genus *Pseudohaje* and considered the species *Pseudohaje goldii* Boulenger, 1895 to be confined to West African forests. Additional distributional data on *P. goldii* are presented in the maps in Spawls and Branch (1995), Spawls et al. (2004), Chippaux (2006) and Dobiey and Vogel (2007). Broadley (1990) presented evidence refuting the occurrence of *P. goldii* in Namibia as proposed by Mertens (1955).



MAP 338. Distribution of *Pseudohaje goldii* in Angola.

Family Colubridae Oppel, 1811**Genus *Chamaelycus* Boulenger, 1919*****Chamaelycus parkeri* (Angel, 1934)****PARKER'S BANDED SNAKE**

Oophilositum parkeri Angel 1934:417. Holotype: MNHN 1934-11 (collector G. Babault). Type locality: "Kabulire (dans les forêts situées à l'Ouest du lac Kivu)" [= Kabulire, Sud-Kivu] Democratic Republic of Congo.

Oophilositum parkeri: Parker (1936:123).

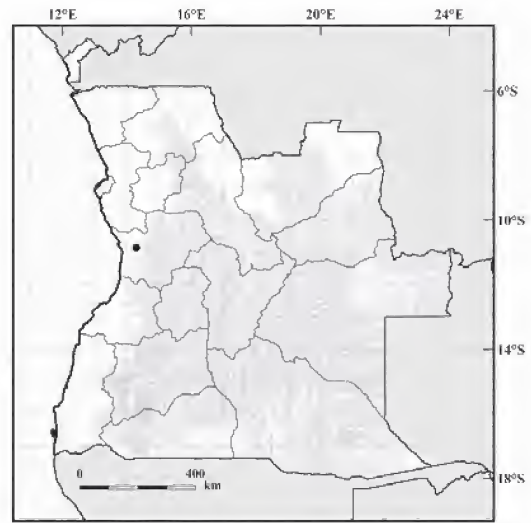
Chamaelycus parkeri: Chippaux (2006:72), Chirio and LeBreton (2007:392), Wallach et al. (2014:155).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is distributed in Central Africa, from northern Congo to the Democratic Republic of Congo and Angola.

Ocurrences in Angola (Map 339): The species has only been recorded from “Congulu,” Kwanza Sul Province in western Angola but it is probable that the species occurs further north in the country. **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:123).

Taxonomic and distributional notes: Further surveys in the country may yield additional records of this species in northern Angola.



MAP 339. Distribution of *Chamaelycus parkeri* in Angola.

Genus *Crotaphopeltis* Fitzinger, 1843

Crotaphopeltis hotamboeia (Laurenti, 1768)

RED-LIPPED SNAKE

Coronella hotamboeia Laurenti 1768:85. Holotype: specimen illustrated by Seba (1734:54, pl. 33, fig. 6), specimen not located. Type locality: “in India orientali” [= East Indies] *fide* Laurenti (1768:85), [Ceylon = Sri Lanka] *fide* Seba (1734), in error, corrected to “Africa” by Loveridge (1957:271).

Crotaphopeltis rufescens: Bocage (1866a:49, 1895a:122), Peters (1881:149), Bocage (1896a:113, 1897b:211).

Leptodira rufescens: Günther (1876b:679), Peters (1877a:615), Bocage (1879b:95).

Crotaphopeltis semiannulatus: Bocage (1895a:122).

Leptodira hotamboeia: Ferreira (1903:12, 1904:116, 1906:169), Boulenger (1905:112), Monard (1937b:129).

Crotaphopeltis hotamboeia: Parker (1936:125), Branch and McCartney (1992:2), Broadley et al. (2003:203), Broadley and Cotterill (2004:51), Chippaux (2006:143), Spawls et al. (2004:379), Trapé and Mané (2006:88), Chirio and LeBreton (2007:398), Wallach et al. (2014:197), Branch and Conradie (2015:200), Ceriaco et al. (2016b:77), Conradie et al. (2016:19).

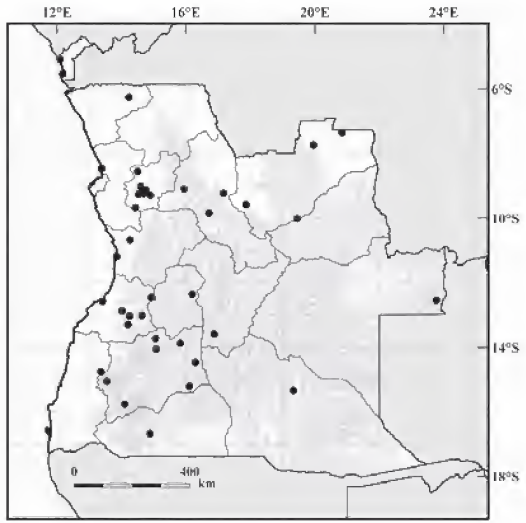
Crotaphopeltis hotamboeia hotamboeia: Mertens (1938:440), Hellmich (1957a:72, 1957b:68), Laurent (1950:9; 1964a:110).

Global conservation status (IUCN): Not Evaluated.

Global distribution: This species is one of the most widespread African snakes, typically occupying moist savannas of sub-Saharan Africa.

Ocurrences in Angola (Map 340): The species occurs in the entire country (including the Cabinda enclave), with exception of the desert regions of the far southwestern Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:49, 1895a:122). **Zaire:** “St. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:122). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Peters 1881:149); “Carumbo” [-7.74422, 19.95467] (Branch and Conradie 2015:200); “Cassange” [-9.58333, 17.86667] (Bocage 1879b:95). **Lunda Sul:** “Alto Cuílo, galerie forestière des sources du ruisseau Tchá-Muchito” [-10.01667, 19.45000] (Laurent 1964a:110). **Bengo:** “Dande” [-8.46667, 13.38333] (Bocage 1895a:122). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:49); “Cafuxi” [-9.24000, 17.17167] (Boulenger 1906:169); “Cangandala National Park” [-9.84606, 16.72233]

(Ceriaco et al. 2016b:77). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:68); “N’golla Bumba” [-9.03333, 14.60000] (Ferreira 1906:169); “Golungo Alto” [-9.13333, 14.76667] (Ferreira 1906:169); “Cambondo” [-9.15963, 14.65771] (Ferreira 1906:169); “Canhoca” [-9.25000, 14.68333] (Boulenger 1905:112); “Rio Lui-nha” [-9.26667, 14.53333] (Ferreira 1906:169); “N’dalla Tando” [-9.30000, 14.91667] (Bocage 1895a:122); “Dondo” [-9.68333, 14.43333] (Ferreira 1903:12). **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:125); “Chingo” [-11.20000, 13.85000] (Ferreira 1904:116). **Moxico:** “Macondo” [-12.55000, 23.76667] (Laurent 1964a:110). **Huambo:** “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:68). **Bié:** “Cubango basin (12b)” [-13.59638, 16.87722] (Conradie et al. 2016:8-9, 19). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:122); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:122); “Benguella” [-12.58333, 13.41667] (Bocage 1895a:122); “Katála” [-12.88333, 14.01667] (Ferreira 1906:169); “Entre Rios” [-13.01667, 14.63333] (Hellmich 1957a:72); “Alto Cubal” [-13.03333, 14.25000] (Mertens 1938:440; Hellmich 1957b:68); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:113, 1897b:211). **Huíla:** “Sangevé” [-13.88333, 15.83333] (Monard 1937b:129); “Caconda” [-13.73333, 15.06667] (Bocage 1895a:122); “Quillengues” [-14.06667, 15.08333] (Bocage 1895a:122); “Kuvangu/Vila da Ponte” [-14.46667, 16.30000] (Monard 1937b:129); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:122; Hellmich 1957b:68); “Kampulu (région de Kasinga)” [-15.21667, 16.11667] (Monard 1937b:129); “Gambos” [-15.76667, 14.10000] (Bocage 1895a:122). **Namibe:** “Biballa” [-14.76667, 13.36667] (Bocage 1895a:122). **Cunene:** “Humbe” [-16.68333, 14.90000] (Bocage 1895a:122). **Cuando Cubango:** “approximately 23 km SE of Cuito Cuanavale” [-15.33333, 19.33333] (Branch and McCartney 1992:2). **Undetermined Locality:** “Cuango” (Peters 1881:149; Bocage 1895a:122) (Malanje Province impossible to georeference: See History Section for more detailed information).



MAP 340. Distribution of *Crotaphopeltis hotamboeia* in Angola.

Taxonomic and distributional notes: Wallach et al. (2014) indicated that no holotype had been indicated for this species. However, Laurenti (1768) provided an indication to an image in Seba (1734) and the individual pictured is the holotype. The history of Seba’s collections have been discussed in detail (Engel 1937, 1961; Boeseman 1970; Juriev 1981; Adler 1989; Bauer 2002; Bauer and Günther 2013). Seba’s second collection (the first had been sold to Peter the Great of Russia in 1716; Driessen-van het Reve 2006) was sold after his death at auction (Anonymous 1752). Seba specimens are known or believed to be present in collections in St. Petersburg, London, Leiden (including specimens until recently in Amsterdam), Paris, Copenhagen, Stockholm, Bremen and Berlin (Boeseman 1970; Juriev 1981; Thireau et al. 1998; Bauer and Günther 2013) but few can be traced to particular plate figures, and the lectotype of *Coronella hotamboeia* is not among these. This species has a wide distribution in sub-Saharan Africa (Broadley and Cotterill 2004) and a phylogeographic analysis is therefore desirable to investigate the possibility of cryptic species (Bates et al. 2014).

Genus *Dasypeltis* Wagler, 1830*Dasypeltis palmarum* (Leach, 1818)

PALM EGG EATER

Coluber palmarum Leach 1818:408. Holotype:1946.1.2.35 (collector J. Cranch). Type locality: “in palm trees at Embomma” (Leach 1818:409) [= Boma], Democratic Republic of Congo.

Dasypeltis palmarum: Günther (1865a:480), Peters (1877a:615).

Dasypeltis scabra var. *inornatum*: Bocage (1867b:227).

Dasypeltis scabra var. *palmarum*: Bocage (1895a:106), Boulenger (1905:112),

Dasypeltis scabra var. *palmarum* (var. *inornatus*): Ferreira (1903:10).

Dasypeltis scabra: Parker (1936:125).

Dasypeltis scabra scabra: Bogert (1940:85).

Dasypeltis palmarum: Gans (1959:219), Chippaux (2006:115), Wallach et al. (2014:208).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola, People’s Republic of Congo, and Democratic Republic of Congo.

Occurrences in Angola (Map 341): The species occurs in the western Angola. The species is distributed from the Cabinda enclave to Benguela Province, mostly near the coast.

Cabinda: “Chinchoxo” [-5.10000, 12.10000]

(Peters 1877a:615; Bocage 1895a:106; Gans 1959:220); “Chiloango” [-5.18333, 12.18333]

(Gans 1959:220); “Landana” [-5.21667, 12.15000] (Gans 1959:220).

Luanda: “Cacua-co, Luanda Dist.” [-8.78333, 13.36667] (Gans 1959:220).

Malanje: “Pungo-Andongo” [-9.66667, 15.58333] (Günther 1865a:480;

Boulenger 1905:112; Monard 1937b:113; Manaças 1973:193; Gans 1959:220).

Kwanza Norte: “Ambaca” [-9.26667, 15.18333] (Bocage 1895a:106; Monard 1937b:113; Manaças 1973:193);

“Rio Muembege, próximo de N’dalla Tando (Cazengo)” (Ferreira 1903:10);

“N’dala Tando” [-9.30000, 14.91667] (Monard 1937b:113; Manaças 1973:193);

“Dondo” [-9.68333, 14.43333] (Gans 1959:220; Manaças 1973:193).

Kwanza Sul: “Congulu” [-9.66667, 15.58333] (Parker 1936:125; Gans 1959:220).

Benguela: “Lobito Bay (baía do Lobito)” [-12.33333, 13.58333] (Bogert 1940:85; Manaças 1973:193; Gans 1959:220);

“Catumbella” [-12.43333, 13.55000] (Bocage 1867b:227, 1895a:106; Monard 1937b:113; Gans 1959:220);

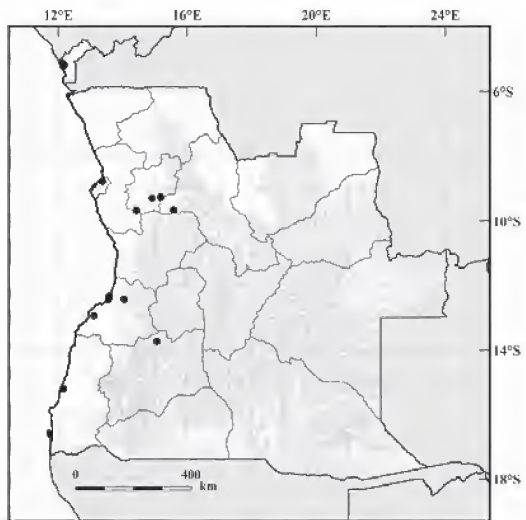
“Quissange” [-12.43333, 14.05000] (Bocage 1895a:106; Monard 1937b:113);

“Dombe” [-12.95000, 13.10000] (Bocage 1867b:227, 1895a:106; 1937b:113; Gans 1959:219).

Huíla: “Caconda” [-13.73333, 15.06667] (Gans 1959:219).

Namibe: “Mossamedes” [-15.20000, 12.15000] (Gans 1959:219).

Taxonomic and distributional notes: None.



MAP 341. Distribution of *Dasypeltis palmarum* in Angola.

Benguela: “Lobito Bay (baía do Lobito)” [-12.33333, 13.58333] (Bogert 1940:85; Manaças 1973:193; Gans 1959:220);

“Catumbella” [-12.43333, 13.55000] (Bocage 1867b:227, 1895a:106; Monard 1937b:113; Gans 1959:220);

“Quissange” [-12.43333, 14.05000] (Bocage 1895a:106; Monard 1937b:113);

“Dombe” [-12.95000, 13.10000] (Bocage 1867b:227, 1895a:106; 1937b:113; Gans 1959:219).

Huíla: “Caconda” [-13.73333, 15.06667] (Gans 1959:219).

Namibe: “Mossamedes” [-15.20000, 12.15000] (Gans 1959:219).

Dasypeltis scabra (Linnaeus, 1758)

COMMON EGG EATER

Coluber scaber Linnaeus 1758:223. Holotype: NHR, formerly MAFR, (Mus. Drottingholm), lost *vide* Andersson (1899) and Gans (1959:87). Type locality: “in Indiis” [India], in error, corrected to “South Africa” by Flower (1933:818).

Dasypeltis fasciolata: Peters (1877a:615).

Dasypeltis scabra: Bocage (1895a:106, 1897b:210), Boulenger (1893:356, 1896:648), Ferreira (1904:115), Monard (1937b:113, 123), Mertens (1938a:440), Themido (1941:10), Broadley and Cotterill (2004:52), Spawls et al. (2004:418), Bates et al. (2014:411), Wallach et al. (2014:208), Ceriaco et al. (2016a:81).

Dasypeltis scabra var. *medici*: Bocage (1895a:106).

Dasypeltis scabra var. 3 (var. *fasciolata*?): Bocage (1895a:106).

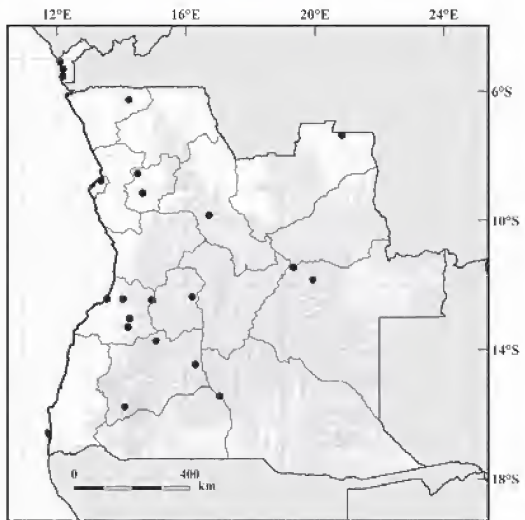
Dasypeltis scabra var. *inornata*: Ferreira (1906:168).

Dasypeltis scabra scabra: Laurent (1954a:60, 1964a:116), Hellmich (1957b:72), Thys van den Audenaerde (1966:35), Manaças (1973:192).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is widely distributed, extending from the south-western Cape northwards to Zambia and the southern half of the Democratic Republic of the Congo, further along the eastern half of the continent to Ethiopia and adjacent parts of eastern Sudan, with isolated records in Egypt and the Arabian Peninsula.

Occurrences in Angola (Map 342): The species occurs in the entire country (including Cabinda enclave), with exception of the desert regions of the far southwestern Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615; Manaças 1973:193); “Molembo” [-5.33333, 12.20000] (Bocage 1895a:106; Manaças 1973:193); “Cabinda” [-5.55000, 12.18333] (Bocage 1895a:106; Manaças 1973:193). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:106; Manaças 1973:193). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:72); “Cambondo” [-9.15963, 14.65771] (Boulenger 1893:356; Manaças 1973:193). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:60, 1964a:116; Thys van den Audenaerde 1966:35; Manaças 1973:193);



MAP 342. Distribution of *Dasypeltis scabra* in Angola.

“entre Capaia et Carumbo” (Laurent 1964a:117). **Lunda Sul:** “Mutianvo” [-11.45000, 19.33333] (Themido 1941:10). **Luanda:** “Cacuaca” [-8.78333, 13.36667] (Boulenger 1893:356). **Malanje:** “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016a:81). **Moxico:** “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1973:192). **Huambo:** “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:72). **Benguela:** “Catumbella” [-12.43333, 13.55000] (Bocage 1895a:106; Manaças 1973:193); “Quissange” [-12.43333, 14.05000] (Bocage 1895a:106; Manaças 1973:193); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:106; Monard 1937b:113; Manaças 1973:193); “Cubal” [-13.03333, 14.25000] (Mertens 1938a:440); “Hanha” [-13.30000, 14.20000] (Bocage 1897b:210). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:106; Monard 1937b:113); “Vila-da-Ponte/Kuvangu” [-14.46667, 16.30000] (Monard 1937b:113, 123); “Gambos” [-15.76667, 14.10000] (Bocage 1895a:106; Monard 1937b:113; Manaças 1973:193). **Cuando Cubango:** “Kakindo” [-15.45000, 17.05000] (Monard 1937b:113, 125; Manaças 1973:193).

Taxonomic and distributional notes: Gans (1959) suggested that the most likely source of the type specimen, based on its described morphology, would be “South West Africa [Namibia] or

the northern Transvaal [Limpopo Province, South Africa].” However, these areas are extremely unlikely to have yielded specimens destined for Europe in the 1730s. The taxonomy of this species in southern Africa is being investigated, and the presence of cryptic taxa has been suggested (M. Bates et al. in prep.).

Genus *Dipsadoboa* Günther, 1858

Dipsadoboa shrevei (Loveridge, 1932)

SHREVE’S TREE SNAKE

Crotaphopeltis shrevei Loveridge 1932b:83. Holotype: MCZ R-32471 (collector K.H. Prior). Type locality: “Missao de Dondi, Bella Vista, via. Lobito, Angola” [= Cachiungo], Huambo Province, Angola.

Crotaphopeltis shrevei: Schmidt (1933:13), Barbour and Loveridge (1946:97), Laurent (1951:210, 1964a:110), Broadley (1968d:138).

Dipsadoboa shrevei shrevei: Rasmussen (1986:59).

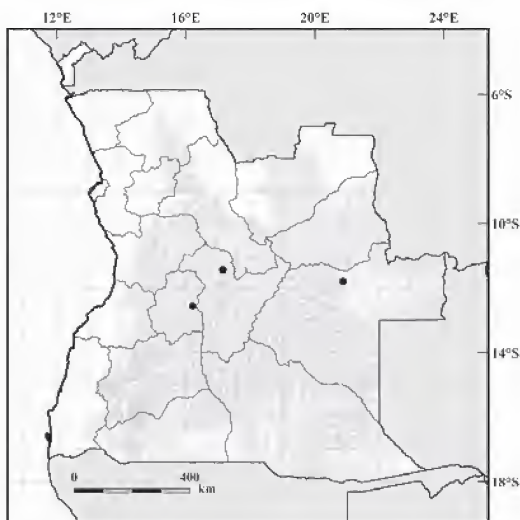
Dispadoboa shrevei: Broadley et al. (2003:210), Broadley and Cotterill (2004:50), Spawls et al. (2004:383), Wallach et al. (2014:228).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from lower Congo and Angola, east through the Democratic Republic of Congo and northern Zambia to southeast Tanzania.

Occurrences in Angola (Map 343): Published species records are in the central interior of Angola. **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:110; Rasmussen 1986:64). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:13; Rasmussen 1986:64). **Huambo:** “Bella Vista, Missao de Dondi” [-12.56667, 16.21667] (Loveridge 1932b:83; Barbour and Loveridge 1946:97; Rasmussen 1986:64; Wallach et al. 2014:228).

Taxonomic and distributional notes: Rasmussen’s (1993) distribution records in adjacent regions suggest, that despite the lack of literature records, it is possible that this species might extend to the Cabinda enclave.



MAP 343. Distribution of *Dipsadoboa shrevei* in Angola.

Genus *Dispholidus* Duvernoy, 1832

Dispholidus typus typus (Smith, 1828)

BOOMSLANG

Bucephalus typus Smith 1828:2. Syntype: RSM, identified by FitzSimons (1937:263), however, not recorded as a type by Herman et al. (1990). Type locality: “eastern districts of South Africa” (Smith 1828:2), restricted to “Old Latakoo [= Lattakoo or Lithako, approx. 27°S, 24°E, i.e. btwn. Kuruman and Taungs, N. Cape Province],” [= Northern Cape or Northwest Province], South Africa.

Bucephalus typus: Bocage (1866a:48, 1870:68, 1879b:95), Peters (1881:149), Ferreira (1900a:52).

Bucephalus capensis: Bocage (1895a:121).

Dispholidus (Bucephalus) typus: Ferreira (1897b:244).

Dispholidus typus: Schmidt (1933:14), Boulenger (1905:113, 1915:213), Loveridge (1936a:40), Monard (1937b:128, 134), Mertens (1938:441), Bogert (1940:68), Themido (1941:10), FitzSimons (1962:196), Manaças (1973:193), Broadley (1990:252), Spawls and Branch (1995:20), Branch (1998:99), Broadley

and Wallach (2002:72), Broadley and Cotterill (2004:51), Broadley et al. (2003:218), Chippaux (2006:159), Trapé and Mané (2006:96), Eimermacher (2012:1), Ceriaco et al. (2016b:79), Wallach et al. (2014:236).

Dispholidus typus punctatus: Branch and McCartney (1992:2).

Dispholidus typus occidentalis: Chirio and LeBreton (2007:422).

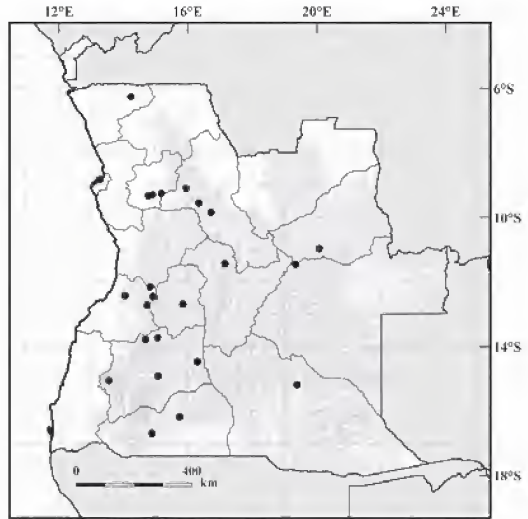
Global conservation status (IUCN): Not Evaluated.

Global distribution: The nominotypical subspecies is known from Senegal east across the Sahel to the Horn of Africa, south to the southwestern Cape, excluding areas of rain forest, grassland and desert.

Ocurrences in Angola (Map 344): The nominotypical subspecies distribution comprises almost the entire country including Cabinda Province, with the exception of the desert regions of far southwestern Angola, and the area occupied by *D. t. punctatus*. **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:121; Monard 1937b:128). **Luanda:** “Loanda” [-8.83333, 13.26667] (Ferreira 1900a:52). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:48, 1895a:121; Monard 1937b:128); “Malanje” [-9.55000, 16.35000] (Peters 1881:149; Bocage 1895a:121); “Cangandala National Park” [-9.84606, 16.72233] (Ceriaco et al. 2016b:79). **Lunda Sul:** “Tyihumbwé” [-10.96667, 20.06667] (Monard 1937b:128, 134); “Mutianvo” [-11.45000, 19.33333] (Themido 1941:10).

Kwanza Norte: “Ambaca” [-9.26667, 15.18333] (Bocage 1895a:121; Ferreira 1900a:52; Monard 1937b:128); “N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1903:12); “Cazengo” [-9.33333, 14.76667] (Ferreira 1900a:52). **Kwanza Sul:** “Mombolo” [-12.16667, 14.83333] (Bogert 1940:68). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:14). **Huambo:** “Galanga” [-12.06667, 15.15000] (Bocage 1895a:121; Monard 1937b:128); “Santo-Amaro” [-12.70000, 15.85000] (Monard 1937b:134). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:121; Monard 1937b:128); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:121; Monard 1937b:128); “Ebanga” [-12.73333, 14.73333] (Monard 1937b:134); “Cubal” [-13.03333, 14.25000] (Mertens 1938:441). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:121; Ferreira 1897:244; Loveridge 1936:40; Monard 1937b:128); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:128, 134); “Kuvangu/Vila da Ponte” [-14.46667, 16.30000] (Monard 1937b:128, 134); “Capelongo” [-14.91667, 15.08333] (Bogert 1940:68); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:121; Monard 1937b:128). **Cunene:** “Mupa” [-16.18333, 15.75000] (Monard 1937b:134); “Humbe” [-16.68333, 14.90000] (Bocage 1895a:121; Monard 1937b:128). **Cuando Cubango:** “approximately 24 km E of Cuito Cuanavale” [-15.18333, 19.38333] (Branch and McCartney 1992:2). **Undetermined Locality:** “Rio Cuando” (Bocage 1895a:121, Monard 1937b:128); “Between Benguela and Bihé” (Boulenger 1905:113; Monard 1937b:128).

Taxonomic and distributional notes: *Dispholidus typus* is often cited as having been described in 1829 (e.g., FitzSimons 1962) in *The Zoological Journal*, however, the description first



MAP 344. Distribution of *Dispholidus typus typus* in Angola.

appeared one year earlier in the *South African Commercial Advertiser* in a short paper that has been reprinted by Ulber (2003) and Branch and Bauer (2005). FitzSimons' restricted type locality is derived from the stated type locality of *Bucephalus viridis* Smith, 1841, a subjective junior synonym of *B. typus* Smith, 1828. Four subspecies: *D. t. typus*, *D. t. viridis* Smith, 1828, *D. t. kivuensis* Laurent, 1955 and *D. t. punctatus* Laurent, 1955 were recognised in the past. Preliminary genetic analyses carried out by Eimermacher (2012) indicate that multiple distinct lineages may be present, some of which should be resurrected and elevated to species status, including *D. t. punctatus* Laurent, 1955 from "Dundo," Angola. Eimermacher and Broadley (in prep.) are currently undertaking a detailed revision of the genus. All Angolan material should be reevaluated in order to determine where species boundaries lie. Eimermacher's (2012) sampling was sparse in southwestern Africa, but his data suggested that central Namibian material was referable to *D. t. viridis* (Smith, 1838). If this form also reaches southern Angola and is likely valid, as suggested by Eimermacher (2012), then it, rather than *D. t. typus*, would be the widespread Boomslang in Angola. However, as no published records from Angola have previously been referred to *D. t. viridis*, we continue to use the nominotypical epithet for Angolan specimens pending relevant genetic data.

Dispholidus typus punctatus Laurent, 1955

SPOTTED BOOMSLANG

Dispholidus typus punctatus Laurent 1955:129. Holotype: RGMC 17395 (currently MRAC) (collector A. Barros Machado). Type locality: "Dundo," Lunda Norte Province, Angola.

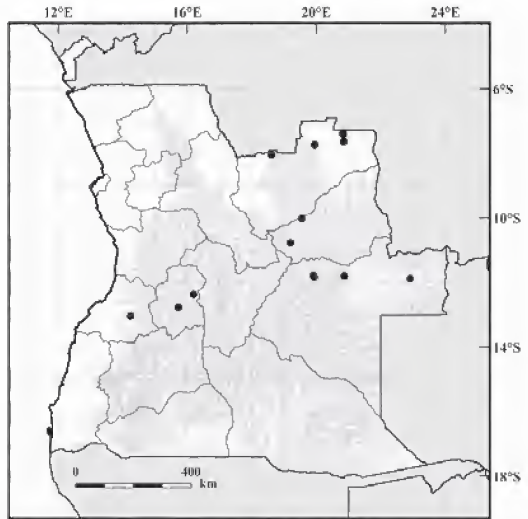
Dispholidus typus: Laurent (1950a:10, 1954a:57), Manaças (1973:193).

Dispholidus typus punctatus: Hellmich (1957b:68), Laurent (1964a:114), Thys van den Audenaerde (1966:35), Broadley (1990:255), Spawls and Branch (1995:21), Branch (1998:99), Broadley and Wallach (2002:72), Broadley et al. (2003:218), Broadley and Cotterill (2004:51), Eimermacher (2012:2), Branch and Conradie (2015:200).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The subspecies is known from forest regions of southern Democratic Republic of Congo, Angola and Zambia.

Occurrences in Angola (Map 345): *Dispholidus typus punctatus* occurs mainly in the eastern regions of the country. **Lunda Norte:** "Dundo" [-7.36667, 20.83333] (Laurent 1950a:10, 1954a:57, 1955:129, 1964a:114; Thys van den Audenaerde 1966:34; Broadley and Wallach 2002:72; Eimermacher 2012:23); "Dundo, R. Mussungue" [-7.41667, 20.83333] (Thys van den Audenaerde 1966:35); "Mwaoka (\pm 45 km S. Dundo)" [-7.65000, 20.85000] (Thys van den Audenaerde 1966:34); "Carumbo" [-7.74422, 19.95467] (Branch and Conradie 2015:200); "R. Camaiala" [-8.05000, 18.61667] (Thys van den Audenaerde 1966:34); "R. Capemba" [-9.25167, 19.55808] (Thys van den Audenaerde 1966:35). **Lunda Sul:** "Alto Cuílo" [-10.01667, 19.55000] (Laurent 1964a:114); "Chutes du Cuango-Muqué, Alto Chicapa" [-10.76667, 19.20000] (Laurent 1964a:114). **Moxico:** "Fazenda Santa Cruz, Luso" [-11.78333, 19.91667] (Manaças



MAP 345. Distribution of *Dispholidus typus punctatus* in Angola.

1973:193-194); “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:114); “Calombe, Luso” [-11.83333, 19.93333] (Manaças 1973:193-194); “Cazombo” [-11.88333, 22.91667] (Laurent 1964a:114). **Huambo**: “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:68); “Nova Lisboa” [-12.76667, 15.73333] (Laurent 1955:129). **Benguela**: “Alto Cubal” [-13.03333, 14.25000] (Hellmich 1957b:68).

Taxonomic and distributional notes: Although Broadley and Wallach (2002) considered *punctatus* a synonym of *D. typus*, Eimermacher (2012) indicated that multiple distinct lineages of boomslang should be probably be resurrected and elevated to species status, including *D. t. punctatus*. On this basis we list this form as a distinct taxon, but retain its subspecific status pending further data. All Angolan material should be reevaluated in order to determine where species boundaries lie. It seems likely on biogeographic grounds that some of the more southern and western records previously attributed to *D. t. punctatus* may, in fact, belong to the nominotypical form or to *D. t. viridis* (see Notes und *Dispholidus typus typus*).

Genus *Grayia* Günther, 1858

Grayia caesar (Günther, 1863)

CAESAR’S AFRICAN WATER SNAKE

Xenurophis caesar Günther 1863:357, pl. 6, fig. c. Holotype: BMNH 1946.1.6.38 (formerly BMNH 1843.1.10.7) (collector W. Raddon). Type locality: “Fernando Pó” [= Bioko], Equatorial Guinea.

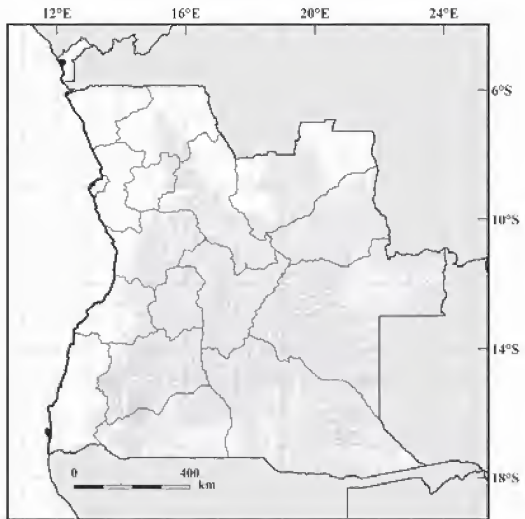
Grayia caesar: Chippaux (2006:94), Chirio and LeBreton (2007:432), Wallach et al. (2014:310).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Cameroon, Central African to Democratic Republic of the Congo.

Occurrences in Angola (Map 346): The species has been recorded from the Cabinda enclave. **Cabinda**: “Mouth of the Loango” [-5.15000, 12.16667] (Boulenger 1894:288).

Taxonomic and distributional notes: This species was only recorded from Angola by Boulenger (1894), this record could correspond to *Grayia smithii* (Leach, 1818), however, the extralimital records of *G. caesar* (Chippaux 2006; Chirio and LeBreton 2007; Wallach et al. 2014) are consistent with its occurrence in the Cabinda enclave.



MAP 346. Distribution of *Grayia caesar* in Angola.

Grayia ornata (Bocage, 1866)

ORNATE AFRICAN WATER SNAKE

Macrophis ornatus Bocage (1866a:47, 1866b:67). Syntypes: ZMB 7772 (formerly MBL), two additional MBL specimens, numbers unknown (collector F.A.P. Bayão), destroyed by fire 18 March 1978. Type locality: Type locality: “Duque de Bragança dans l’interior d’Angola” (Bocage 1866a:47) [= Calandula], Malanje Province, Angola.

Glaniolestes ornatus: Peters (1877a:614).

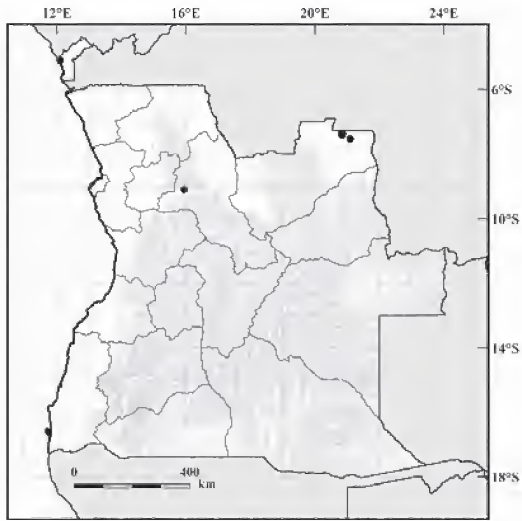
Grayia ornata: Bocage (1897a:200, 1895a:104), Boulenger (1915:207), Loveridge (1936a:34), Laurent (1950a:9, 1954a:44, 1964a:102), Thys van den Audenaerde (1966:34), Broadley (1983:21), Broadley et al. (2003:179), Broadley and Cotterill (2004:49), Chippaux (2006:95), Chirio and LeBreton (2007:434), Wallach et al. (2014:310).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species extends from Cameroon south to Angola, west to the former Katanga Province of the Democratic Republic of Congo and northwestern Zambia.

Occurrences in Angola (Map 347): The species is limited to northern regions of the country including the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:614; Bocage 1895a:104). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Bocage 1895a:104; Laurent 1950a:9, 1954a:44, 1964a:10; Thys van den Audenaerde (1966:34); “in a tributary of the right side of the Tchihumbwe about 50 km west of Dundo” [-7.38333, 20.85000] (Laurent 1950:9); “Dundo (Mussungue river)” [-7.41667, 20.83333] (Thys van den Audenaerde 1966:349); “Luachimo” [-7.53333, 21.08333] (Laurent 1950a:9). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:47, 1866b:67, 1895a:104, 1897a:200, Loveridge 1936a:34; Broadley 1983:21; Chippaux 2006:95; Chirio and LeBreton 2007:434; Wallach et al. 2014:310).

Taxonomic and distributional notes: The species was described as new by Bocage in two different papers (1866a, b), both of which appeared in the November 1866 issue of the same journal.



MAP 347. Distribution of *Grayia ornata* in Angola.

Grayia smythii (Leach, 1818)

SMYTH'S AFRICAN WATER SNAKE

Coluber Smythii Leach 1818:409. Holotype: BMNH 1946.1.1.67 (formerly BMNH 48.9.15.10) or BMNH 1946.1.5.16 (collector J. Cranch, don. W.E. Leach), see Boulenger (1894:287). Type locality: “near Embomma” (Leach 1818:409), [= vicinity of Boma, Bas-Congo Province] Democratic Republic of Congo.

Grayia triangularis: Bocage (1866a:47, 1895a:102).

Grayia smithii: Boulenger (1894:287, 1915:207).

Grayia smithii: Ferreira (1906:168), Laurent (1950a:8, 1964a:102), Thys van den Audenaerde (1966:34), Trapé and Mané (2006:104), Chirio and LeBreton (2007:436)

Grayia smythii: Spawls et al. (2004:337), Chippaux (2006:93), Wallach et al. (2014:311).

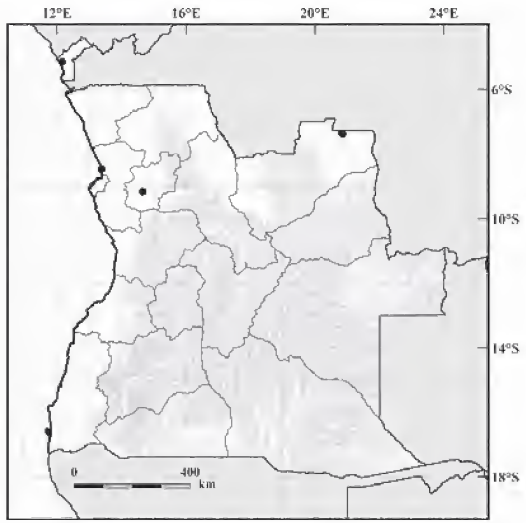
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Lake Victoria west to Senegal, north into the southern Sudan and southwest to northern Angola.

Occurrences in Angola (Map 348): The species occurs in the northern Angola. **Cabinda:** “Mouth of the Loango” [-5.15000, 12.16667] (Boulenger 1894:287). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:102); “Barrage de la Luachimo” [-7.38333, 20.85000] (Thys van den Audenaerde 1966:34); “Dundo, rivière Luachimo” [-7.38333, 20.85000] (Laurent 1950a:8). **Bengo:** “Rio Dande” [-8.46667, 13.38333] (Bocage 1895a:102). **Kwanza Norte:** “Cam-bondo” [-9.15963, 14.65771] (Ferreira 1906:168).

Taxonomic and distributional notes: Two possible specimens are noted as being the type (see above). In the BMNH registers both (under their 1946 reregistration numbers) are listed as being a type of *C. smythii* or *G. silurophaga* (or *Grayia smithii* or *G. silurophaga*). *Grayia*

silurophaga Günther, 1858 is a junior subjective synonym of *G. smythii* (Leach, 1818). According to Boulenger (1894), Günther probably inadvertently included the type of Leach's species in the type series of his own new species. Although Wallach et al. (2014) considered Boulenger's (1894) comments as constituting a lectotype designation, it seems more probable that only a single specimen was present from the collection made by Cranch. However, it is impossible to determine this from the description itself. The correct version of the specific epithet of this species has been questioned. Although many authors have used *G. smithii*, the description employs *Smythii*. Although there is compelling evidence from the original publication (several other new species of animals are named with the patronym *Smithii*) that the species was probably named after Professor Christen Smith, who accompanied the expedition (see Laurent 1956), Wallach et al. (2014) are correct that Article 32.5 of the *International Code of Zoological Nomenclature* prohibits an emendation under the present circumstances.



MAP 348. Distribution of *Grayia smythii* in Angola.

***Grayia tholloni* Mocquard, 1897**

THOLLON'S AFRICAN WATER SNAKE

Grayia Tholloni Mocquard 1897b:11. Syntypes: MNHN [2 specimens] specimen numbers unknown, and Musée de Toulouse [2 specimens], specimen numbers unknown (collector F.-R. Thollon). Type locality: "Congo français ... Brazaville" (Mocquard 1897:11), [= Brazaville], Congo.

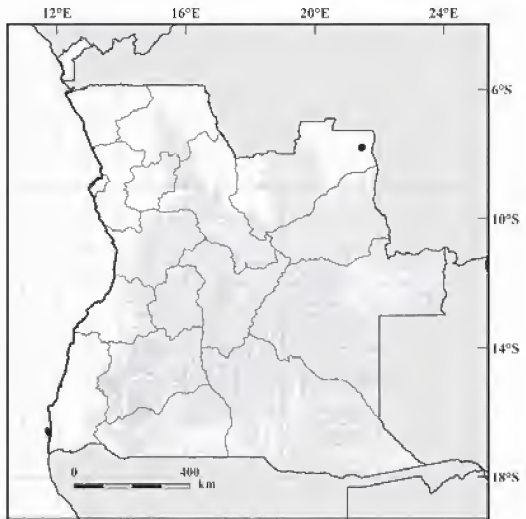
Grayia tholloni: Laurent (1954a:44), Loveridge (1957:267), Broadley (1983:22), Broadley et al. (2003:182), Spawls et al. (2004:338), Broadley et al. (2003:182), Chippaux (2006:95), Trapé and Mané (2006:105), Chirio and LeBreton (2007:438), Wallach et al. (2014:311).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Senegal through Ethiopia and southern Sudan south through the Great Lakes region to western Tanzania, northern Zambia and northeastern Angola.

Ocurrences in Angola (Map 349): The species occurs in the extreme northeast of the country. **Lunda Norte:** "Muita (Luembe E)" [-7.80000, 21.45000] (Laurent 1954a:44).

Taxonomic and distributional notes: The presumed MNHN syntypes are not listed in the Paris Museum online collections database.



MAP 349. Distribution of *Grayia tholloni* in Angola.

Genus *Hapsidophrys* Fischer, 1856

Hapsidophrys smaragdinus (Schlegel, 1837)

EMERALD SNAKE

Dendrophis smaragdina Schlegel 1837:237. Lectotype: RMNH 909 (collector D.F. Eschricht), designated by Hoogmoed in Hughes and Barry (1969:1017). Type locality: “Côte d’or” [= Ghana], given as “Côte de Guinée i.e., coastal Ghana” *fide* Hughes and Barry (1969:1017) by lectotype designation.

Hapsidophrys smaragdina: Peters (1877a:615), Bocage (1887a:186, 1895a:96), Spawls et al. (2004:364), Chippaux (2006:125), Chirio and LeBreton (2007:446).

Gastropyxis smaragdina: Boulenger (1915:206), Thys van den Audenaerde (1966:33), Laurent (1954a:49, 1964a:108), Hellmich (1957b:65).

Hapsidophrys smaragdinus: Wallach et al. (2014:314).

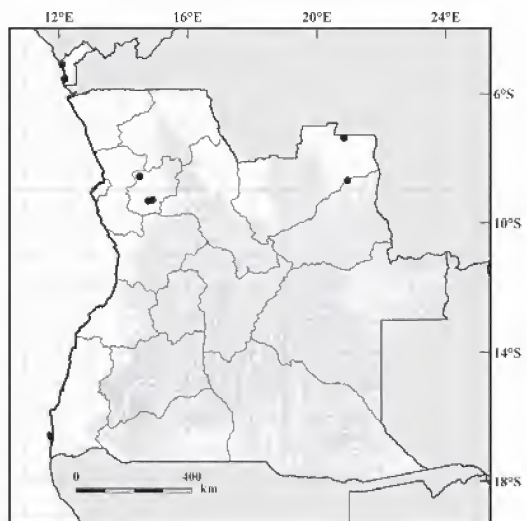
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from western and central Africa, from Gambia to Angola and Uganda and Tanzania, with an isolated population on São Tomé Island.

Occurrences in Angola (Map 350): The species occurs in the northern Angola, including the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615; Bocage 1887a:186, 1895a:96); “Cabinda” [-5.55000, 12.18333] (Bocage 1895a:96). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:49, 1964a:108; Thys van den Audenaerde 1966:33); “Sombo riv. Tchiumbue” [-8.68333, 20.95000] (Laurent 1954a:49). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:65); “N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1903:10); “Cazengo” [-9.33333, 14.76667] (Bocage 1895a:96).

Taxonomic and distributional notes:

The description notes numerous specimens available to Schlegel (1837), however, only two specimens collected by Eschricht, including the lectotype, were associated with an explicit locality.



MAP 350. Distribution of *Hapsidophrys smaragdinus* in Angola.

Genus *Hormonotus* Hallowell, 1857

Hormonotus modestus (Duméril, Bibron and Duméril, 1854)

UGANDA HOUSE SNAKE

Lamprophis modestus Duméril, Bibron and Duméril 1854:429. Holotype: RMNH 304 (collector H.S. Pel). Type locality: “côte de Guinée,” restricted to “Dabocrom, Ghana” *fide* Hughes and Barry (1969:1015).

Hormonotus modestus: Boulenger (1896:617, 1915:204), Parker (1936:125), Loveridge (1957:253), Spawls et al. (2004:329), Chirio and LeBreton (2007:450), Wallach et al. (2014:331).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widespread in tropical West and Equatorial Africa from Guinea to Uganda and southwestern Kenya and into Angola.

Occurrences in Angola (Map 351): The species is only known from northwestern Angola. **Cabinda:** “Mouth of the Loango” [-5.15000, 12.16667] (Boulenger 1896:617). **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:125).

Taxonomic and distributional notes:

None.

MAP 351. Distribution of *Hormonotus modestus* in Angola.**Genus *Lycodonomorphus* Lichtenstein, 1823*****Lycodonomorphus subtaeniatus* Laurent, 1954****EASTERN CONGO WHITE-BELLIED
WATER SNAKE**

Lycodonomorphus subtaeniatus subtaeniatus Laurent 1954a:38, figs. 1–4. Holotype: MRAC 14864 (formerly RGMC 14864) (collector N'Kele). Type locality: “Keseki, près de Kwamouth” [= Keseki, near Kwamouth], Democratic Republic of Congo.

Lycodonomorphus subtaeniatus: Broadley and Cotterill (2004:48), Wallach et al. (2014:399).

Global conservation status (IUCN):

Least Concern.

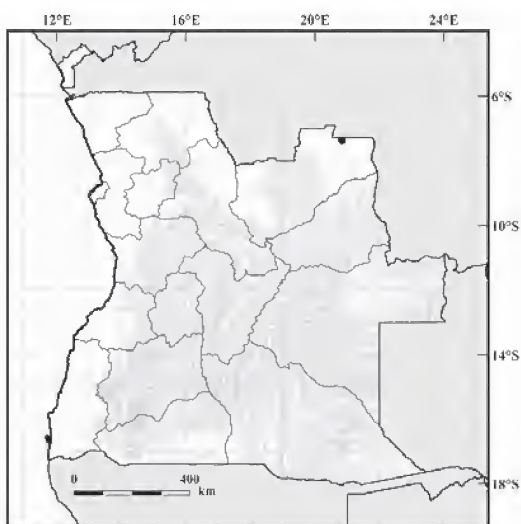
Global distribution: The species is known from Democratic Republic of Congo and northern Angola. Its presence in the People's Republic of Congo is likely but unconfirmed.

Ocurrences in Angola (Map 352): The species is known from northeastern Angola.

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1954a:38).

Taxonomic and distributional notes:

Lycodonomorphus subtaeniatus upembae Laurent, 1954 has been recognized as specifically distinct and has been transferred to *Boaedon* based on phylogenetic information by Greenbaum et al. (2015).

MAP 352. Distribution of *Lycodonomorphus subtaeniatus* in Angola.

Genus *Mopaneveldophis* Figueroa, McKelvy, Grismer, Bell and Lailvaux, 2016***Mopaneveldophis zebrinus* (Broadley and Schätti, “1997” 1999)****MOPANEVELD SNAKE**

Coluber zebrinus Broadley and Schätti “1997” 1999:172, figs. 2–3, 5. Holotype: SMWN 8046 (collectors M. Lindeque and M. Griffin). Type locality: “near the Cunene River, at Ruacana, western Owamboland, Namibia.”

Coluber zebrinus: Bauer et al. (2001:79).

Hemerophis zebrinus: Wallach et al. (2014:319).

Mopaneveldophis zebrinus: Figueroa et al. (2016:23).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from northwestern Namibia.

Ocurrences in Angola: The species is expected to occur in southern areas of Namibe and Cunene provinces, near the Cunene River.

Taxonomic and distributional notes: Although the date on the paper in which this species was described is 1997, there was a significant delay in publication and the actual date is 1999 (*vide* B. Schätti, pers. comm., Oct. 2016). Bauer et al. (2001) suggested that this species would likely eventually be added to the herpetofauna of Angola, based on the similarities of its typical habitat with the adjacent southwestern regions of Angola. Wallach et al. (2014) were the first to allocate this species to *Hemerophis*, but provided no justification for this. Subsequently Figueroa et al. (2016), based on molecular phylogenetic data, erected a new genus, *Mopaneveldophis*, to accommodate the species.

Genus *Philothamnus* Smith, 1840***Philothamnus angolensis* Bocage, 1882****ANGOLAN GREEN SNAKE**

Philothamnus angolensis Bocage 1882b:7. Syntypes: MBL T92.1456 and others (collectors J.A. d’Anchieta and J. Horta), destroyed fire 18 March 1978. Type locality: “Capangombe” and “Angola,” restricted to “Capangombe,” Namibe Province, by Loveridge (1951:9).

Ahaetulla irregularis: Günther (1865a:480).

Philothamnus irregularis: Peters (1881:149), Bocage (1882b:6, 1887b:205, 1895a:85, 1896a:112), Ferreira (1906:167).

Chlorophis angolensis: Boulenger (1893:95, 1915:205), Frade (1963:252).

Chlorophis irregularis: Boulenger (1893:96), Parker (1936:125), Monard (1937b:114, 121), Mertens (1938a:439), Bogert (1940:53).

Philothamnus angolensis: Bocage (1897a:200), Hughes (1985:518), Broadley (1990:238), Branch (1998:94), Broadley and Cotterill (2004:51), Spawls et al. (2004:552), Chippaux (2006:135), Chirio and LeBreton (2007:500), Bates et al. (2014:416), Wallach et al. (2014:542).

Chlorophis (Philothamnus) irregularis: Ferreira (1903:10).

Philothamnus Guntheri: Ferreira (1906:168).

Philothamnus irregularis var. *angolensis*: Ferreira (1900a:51, 1904:115).

Chl. angolensis (Philothamnus angolensis): Monard (1937b:114).

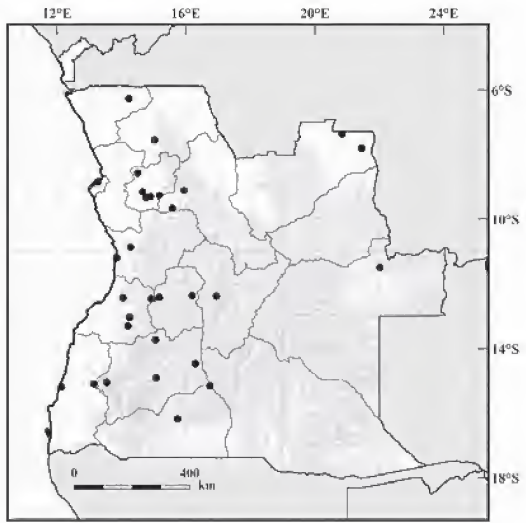
Philothamnus irregularis irregularis: Loveridge (1951:9, 1957:261), Hellmich (1957b:64), FitzSimons (1962:144), Manáças (1973:191).

Global conservation status (IUCN): Not Evaluated.

Global distribution: Cameroon east to Sudan and South Sudan, south to northern Namibia in the west and northeastern KwaZulu-Natal, South Africa in the east.

Ocurrences in Angola (Map 353): The species is known chiefly from western Angola, however, its distribution may comprise most of country, exclusive of the desert regions of far southwestern Angola. **Zaire:** “St. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1895a:85). **Uíge:**

“Fazenda Otilia, Encoge” [-7.55000, 15.03333] (Manaças 1973:191). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:8, 1954a:47, 1964a:106; Thys van den Audenaerde 1966:32); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1954a:47). **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1895a:85; Ferreira 1900a:51; Monard 1937b:114). **Bengo:** “Cacolo ao Rio Bengo” (Ferreira 1900a:51). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:49, 1882b:5, 1895a:85; Monard 1937b:114); “Pungo-Andongo” [-9.66667, 15.58333] (Günther 1865a:480; Bocage 1882b:5, 1895a:85; Ferreira 1906:167; Monard 1937b:114). **Moxico:** “Lago Dilolo” [-11.50000, 22.01667] (Manaças 1973:191). **Huambo:** “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:64); “Mt. Moco” [-12.41667, 15.18333] (Parker 1936:125). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:64); “Ambaca” [-9.26667, 15.18333] (Ferreira 1900a:51); “Cazengo” [-9.33333, 14.76667] (Ferreira 1900a:51); “Cambondo” [-9.15963, 14.65771] (Boulenger 1893:356; Ferreira 1906:167, Monard 1937b:114, Manaças 1973:193); “N’dalla Tando” [-9.30000, 14.91667] (Ferreira 1903:10). **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:125); “Chingo” [-11.20000, 13.85000] (Ferreira 1904:115; Monard 1937b:114). **Bié:** “Silva Porto” [-12.38333, 16.95000] (Manaças 1973:191). **Benguela:** “Quissange” [-12.43333, 14.05000] (Bocage 1895a:85; Monard 1937b:114); “Quindumbo” [-12.46667, 14.93333] (Bocage 1895a:85; Monard 1937b:114); “Alto Cubal” [-13.03333, 14.25000] (Mertens 1938a:439; Hellmich 1957b:64); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:112). **Huíla:** “Caconda” [-13.73333, 15.06667] (Boulenger 1893:96; Bocage 1895a:85; Monard 1937b:114); “Capelongo” [-14.91667, 15.08333] (Bogert 1940:53); “Kuvangu/Vila-da-Ponte” [-14.46667, 16.30000] (Monard 1937b:121); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:85, 1887b:205, 1895a:85; Monard 1937b:114). **Namibe:** “Capangombe” [-15.10000, 13.15000] (Bocage 1882b:6, 7, 1897a:200; Loveridge 1951:9, 1957:261; Broadley 1990:238; Chippaux 2006:135; Chirio and LeBreton 2007:500; Wallach et al. 2014:52); “Mossamedes” [-15.20000, 12.15000] (Bocage 1887b:205, 1895a:85). **Cunene:** “Ruisseau Mbalé” [-15.16667, 16.75000] (Monard 1937b:121); “Mupa” [-16.18333, 15.75000] (Monard 1937b:121). **Undetermined Locality:** “Cuango” (Peters 1881:149) (Malanje Province impossible to georeference: See History Section for more detailed information).



MAP 353. Distribution of *Philothamnus angolensis* in Angola.

Taxonomic and distributional notes: The majority of Angolan literature records for *Philothamnus irregularis* (Leach, 1819) are probably referable to *P. angolensis* or *P. hoplogaster*, two species with which it has commonly been confused (Hughes 1985). *Philothamnus irregularis* is essentially a West Africa form ranging from Senegal to northern Cameroon and east to southwestern Chad. Its distribution south of Cameroon and in East Africa is a matter of contention (Loveridge 1951; Rödel and Schmitz 2010). Current literature, including Hughes (1985), Chippaux (2006), Trapé and Mané (2006) and Wallach et al. (2014), have not included Angola in the distribution of *P. irregularis*, although Wallach et al. (2014) included southern and western provinces of the Democratic Republic of Congo in its range. Based largely on the maps of Hughes (1985), we

have tentatively allocated literature records of *P. irregularis* to either *P. angolensis* or *P. hoplogaster*, although all of these should be verified and some may refer to other congeners. Hughes (1985) plotted numerous records for *P. angolensis*, chiefly in the west of the country, based on museum specimens and one literature record from Cuando Cubango near the Namibian border, unfortunately without providing precise localities.

***Philothamnus carinatus* (Andersson, 1901)**

THIRTEEN-SCALED GREEN SNAKE

Chlorophis carinatus Andersson 1901:9. Syntypes: NHR 1972 (collector Knöppel), NRH 1973-76 (collectors K.W. Knutson and G. Valdaui) [5 specimens]. Type locality: “Mapanja, Cameroon” and “Cameroon” restricted to “Mapanja” [Sud-Ouest Province, Cameroon] *fide* Mertens (1964:227).

Chlorophis heterodermus carinatus: Thys van den Audenaerde (1966:32).

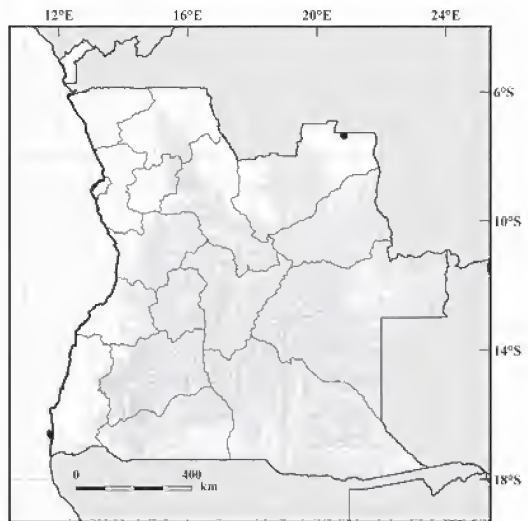
Philothamnus carinatus: Broadley and Cotterill (2004:51), Spawls et al. (2004:354), Chippaux (2006:135), Chirio and LeBreton (2007:504), Wallach et al. (2014:543).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from from Guinea to eastern Kenya and Tanzania, south to the former Katanga and northeastern Angola.

Ocurrences in Angola (Map 354): The species has only been recorded from Dundo in northeastern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Thys van den Audenaerde 1966:32).

Taxonomic and distributional notes: The Dundo record from Thys van den Audenaerde (1966) appears to be the only explicitly named locality cited for the species in Angola, however Wallach et al. (2014) state that the species is also distributed in the northwestern regions of Angola in Cabinda Province, perhaps based on the map of Hughes (1985).



MAP 354. Distribution of *Philothamnus carinatus* in Angola.

***Philothamnus dorsalis* (Bocage, 1866)**

STRIPED GREEN SNAKE

Leptophis dorsalis Bocage 1866a:48, 1866b:69. Lectotype: MBL specimen number unknown (collector J.A. d’Anchieta), designated by Bocage (1882b:10), destroyed by fire 18 March 1978. Type locality: “Cabinda” and “Loanda” (Bocage 1866a:48; 1897a:200), but given as “Duque de Bragança” and “Molembo” by Bocage (1866b:70), restricted to “Molembo (côte de Loango),” Cabinda Province, through designation of lectotype.

Leptophis dorsalis: Bocage (1867b:226).

Ahaetulla dorsalis: Günther (1876b:679).

Philothamnus dorsalis: Bocage (1882b:10, 1887a:185, 1895a:92, 1897a:200), Boulenger (1893:101, 1915:206), Ferreira (1897b:244), Hughes (1985:520), Chippaux (2006:133), Chirio and LeBreton (2007:506), Wallach et al. (2014:544).

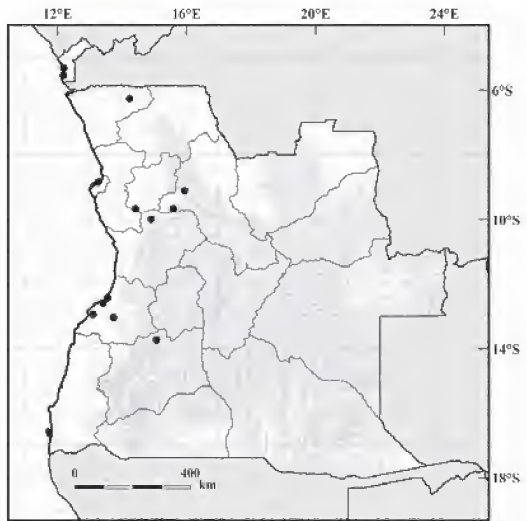
Philothamnus semivariegatus dorsalis: Bogert (1940:56), Loveridge (1933:238, 1951:11, 1957:262), Hellmich (1957b:65).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola, Cameroon, Congo, Democratic Republic of Congo and Gabon.

Occurrences in Angola (Map 355): The species occurs in the central-north western Angola. **Cabinda:** “Molembo” [-5.33333, 12.20000] (Bocage 1866b:69, 1882b:10, 1895a:92; Loveridge 1933:238, 1951:11, 1957:262; Chirio and LeBreton 2007:506; Wallach et al. 2014:544); “Cabinda” [-5.55000, 12.18333] (Bocage 1866a:48, 1895a:92, 1897a:200). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1881a:185, 1895a:92). **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1866a:48, 1867b:226, 1882b:10, 1895a:92, 1897a:200; 1957:262). **Bengo:** “Rio Dande” [-8.46667, 13.38333] (Bocage 1882b:10, 1895a:92). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866b:69; Loveridge 1933:238); “Pungo-Andongo” [-9.66667, 15.58333] (Bocage 1882b:10; 1895a:92). **Kwanza Norte:** “Dondo” [-9.66667, 14.41667] (Hellmich 1957b:65). **Kwanza Sul:** “Libolo” [-9.98333, 14.90000] (Hellmich 1957b:65). **Benguela:** “Catumbella” [-12.43333, 13.55000] (Bocage 1867c:226, 1882b:10, 1895a:92); “Benguella” [-12.58333, 13.41667] (Bocage 1867b:226, 1882b:10, 1895a:92; Boulenger 1893:101); “Dombe” [-12.95000, 13.10000] (Bocage 1867c:226; Hughes 1985:520). **Huila:** “Caconda” [-13.73333, 15.06667] (Ferreira 1897b:244; Hughes 1985:520). **Undetermined Locality:** “no locality” (Ferreira 1897b:244); “Carangigo” [-13.03333, 13.73333] (Boulenger 1893:101); “Benguella to Ogouoé” (Boulenger 1893:101).

Taxonomic and distributional notes: The species was described as new by Bocage in two different papers (1866a, b), both of which appeared in the November 1866 issue of the same journal. Unlike many of the descriptions in 1866a, however, that of *Leptophis dorsalis* is a *nomen nudum* as there is no description, only a statement that it is similar to *Leptophis Chenoni* [= *Philothamnus irregularis*]. In the first paper, two specimens from “Cabinda”, (collected by Anchieta) and “Loanda” (collected by Bayão) were noted. In the description that made the name available, Bocage (1866b) cited the “Cabinda” specimen as being from “Molembo” and that collected by Bayão from “Duque de Bragança.” Bocage (1882b) referred to the Molembo specimen as the type, and mentioned numerous other specimens, but none from Duque de Bragança. In Bocage’s (1897a) type catalogue he again referred only to “Cabinda” and “Loanda.” The locality “Duque de Bragança” may have been an error, as Bocage never cited it in his subsequent works. However, ZMB 6467 is marked in the Berlin catalogue as a type specimen from “Angola” obtained from Bocage, and it is also possible that the “Duque de Bragança” specimen had been traded away before Bocage’s (1882b) paper on *Philothamnus*. Bogert (1940), Loveridge (1933, 1951, 1957), and Hellmich (1957b) considered *P. dorsalis* as a subspecies of *P. semivariegatus*, however, according to Hughes (1985) this is untenable on geographic grounds, since the two co-occur in the lower Congo.



MAP 355. Distribution of *Philothamnus dorsalis* in Angola.

Philothamnus heterodermus* (Hallowell, 1857)*EMERALD GREEN SNAKE**

Chlorophis heterodermus Hallowell 1857:54. Holotype: ANSP 5219. Type locality: “Gaboon country” [= Gabon].

Philothamnus heterodermus: Bocage (1895a:89), Hughes (1985:514), Chippaux (2006:130), Chirio and LeBreton (2007:508), Ceriaco et al. (2014b:671), Wallach et al. (2014:544).

Chlorophis heterodermus: Parker (1936:125).

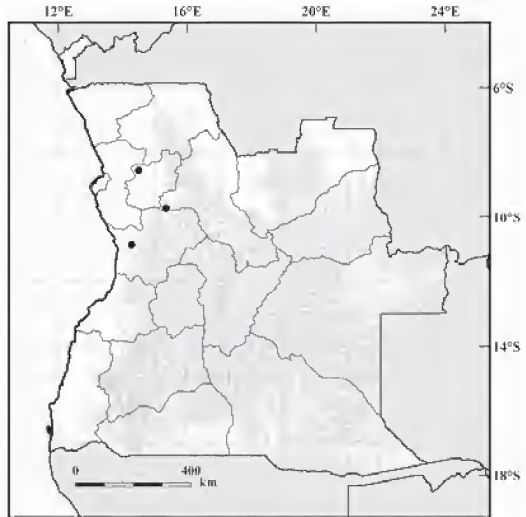
Philothamnus heterodermus heterodermus: Loveridge (1951:6), Hellmich (1957b:64).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Guinea-Bissau to Uganda, Burundi, Rwanda and Tanzania, and south through Gabon, Congo, the Democratic Republic of Congo, and Angola.

Occurrences in Angola (Map 356): The species occurs in northwestern Angola, including the Cabinda enclave. **Malanje:** “Capanda” [-9.72841, 15.34585] (Ceriaco et al. 2014b:671). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:64; Hughes 1985:514). **Kwanza Sul:** “Congulu” [-10.86667, 14.28333] (Parker 1936:125; Hughes 1985:514).

Taxonomic and distributional notes: Hughes (1985) regarded a record from Karibib in central Namibia as valid, however, we reject this, as only *P. angolensis* Bocage, 1882 *P. ornatus* Bocage, 1872, and *P. semivariegatus* (Smith, 1840) are now believed to occur in Namibia.



MAP 356. Distribution of *Philothamnus heterodermus* in Angola.

Philothamnus heterolepidotus* (Günther, 1863)*SLENDER GREEN SNAKE**

Ahaetulla heterolepidota Günther 1863:286. Holotype: BMNH 1946.1.10.21 (collector unknown). Type locality: “Africa,” restricted to “West Africa” by Boulenger (1894:96).

Lepthophis heterolepidota: Bocage (1866a:48, 1866b:69).

Philothamnus heterolepidotus: Bocage (1879b:95, 1882b:8-9, 1887a:185, 1895a:88), Loveridge (1951:10, 1957:261), Laurent (1954a:48), Hughes (1985:525), Broadley et al. (2003:195), Spawls et al. (2004:356), Chippaux (2006:131), Chirio and LeBreton (2007:510), Wallach et al. (2014:544).

Chlorophis heterolepidotus: Boulenger (1893:95, 1905:112, 1915:205), Monard (1937b:120), Laurent (1950a:8, 1964a:105), Thys van den Audenaerde (1966:33).

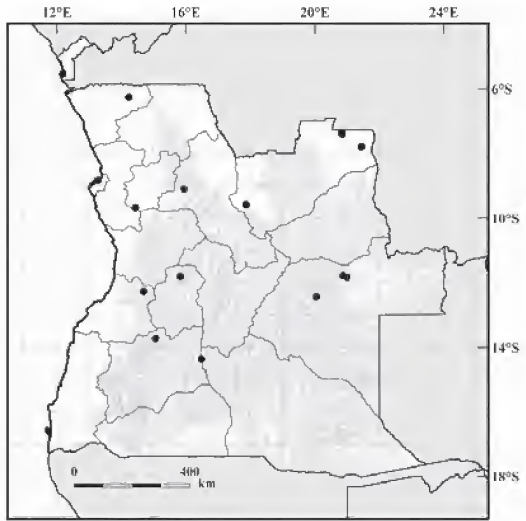
Philothamnus irregularis irregularis: Manáças (1873:191).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Sierra Leone to Sudan, Kenya and western Ethiopia south to the Democratic Republic of Congo, Angola, and Zambia.

Occurrences in Angola (Map 357): The species occurs in the entire country with exception of the arid desert areas. **Cabinda:** “Cabinda” [-5.55000, 12.18333] (Bocage 1895a:88). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:185, 1895a:88). **Luanda:** “Loanda” [-8.83333, 13.26667] (Bocage 1887a:185). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1950a:8, 1954a:48); “Dundo, R. Mussungue” [-7.41667, 20.83333] (Thys van den Audenaerde

1966:33); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:8); “Cassange” [-9.58333, 17.86667] (Bocage 1895a:88; Monard 1937b:114). **Moxico**: “environs du lac Calundo, near Cameia” [-11.80000, 20.86667] (Laurent 1964a:105); “Ñaricumbi, Réserve de chasse de Cameia” [-11.83333, 21.00000] (Laurent 1964a:105); “Margens do rio Lungué, Bingo-Moxico” [-12.45000, 20.05000] (Mananças 1973:191). **Malanje**: “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:48, 1866b:69, 1882b:8, 1895a:88; Boulenger 1905:112; Monard 1937b:114). **Kwanza Norte**: “Dondo” [-9.68333, 14.43333] (Bocage 1882a:8, 1895a:88; Monard 1937b:114). **Huambo**: “Bimbi” [-11.81667, 15.83333] (Monard 1937b:114, 120). **Benguela**: “Quibula” [-12.28333, 14.68333] (Bocage 1895a:88; Monard 1937b:114). **Huíla**: “Caconda” [-13.73333, 15.06667] (Bocage 1882b:8, 1895a:88; Monard 1937b:114). **Quando Cubango**: “Kutatu” [-14.36667, 16.48333] (Monard 1937b:114, 120). **Undetermined Locality**: “Cuango” (Bocage 1887a:185) (Malanje Province impossible to georeference: See History Section for more detailed information).



MAP 357. Distribution of *Philothamnus heterolepidotus* in Angola.

Taxonomic and distributional notes: Wallach et al. (2014) noted that the BMNH catalogue lists BMNH 1946.1.10.25 as a type, but the specimen under this number is actually listed as *Ahaetulla gracillima* Günther, 1888, a junior synonym of *P. heterolepidotus* (Günther, 1863). According to Hughes (1985) *Philothamnus heterolepidotus* is difficult to distinguish from *P. irregularis* (Leach, 1819). Loveridge (1951) also noted this and remarked that this species was, for some time, misidentified as *P. natalensis* (Smith, 1848) or *P. ornatus* (Bocage, 1862) [= *Philothamnus*]. Monard's (1937b) specimens from “Bimbi,” Huambo Province and “Kutatu” Cuando Cubango Province, could possibly belong to *ornatus* (Loveridge 1951).

Philothamnus hoplogaster (Günther, 1863)

SOUTHEASTERN GREEN SNAKE

Ahaetulla hoplogaster Günther 1863:286. Syntypes: BMNH 1946.1.6.1 (formerly BMNH 62.3.14.6), 1946.1.6.6 and 1946.1.6.14 (formerly BMNH 62.3.14.12) (collector T. Ayres) [BMNH 1946.1.6.6 is listed in the BMNH register as having the locality “Off Natal” and no collector is listed]. Type locality: “Port Natal” (Günther 1863:286), [= Durban, eastern KwaZulu-Natal], South Africa.

Ahaetulla irregularis [part]: Günther (1865a:480).

Leptophis Chenoni: Bocage (1866a:49).

Philothamnus irregularis: Peters (1877a:615), Bocage (1882b:6, 1895a:85), Ferreira (1906:167).

Philothamnus hoplogaster: Bocage (1887a:186; 1895a:86), Branch (1998:94), Hughes (1985:517), Spawls et al. (2004), Bates et al. (2014:417), Wallach et al. (2014:545), Conradie et al. (2016:19).

Chlorophis irregularis: Parker (1936:125), Monard (1937b:114), Themido (1941:10), Laurent (1950a:8).

Chlorophis sp. (*hoplogaster*?): Monard (1937b:114, 120).

Philothamnus irregularis irregularis: Hellmich (1957b:64), Laurent (1954a:47).

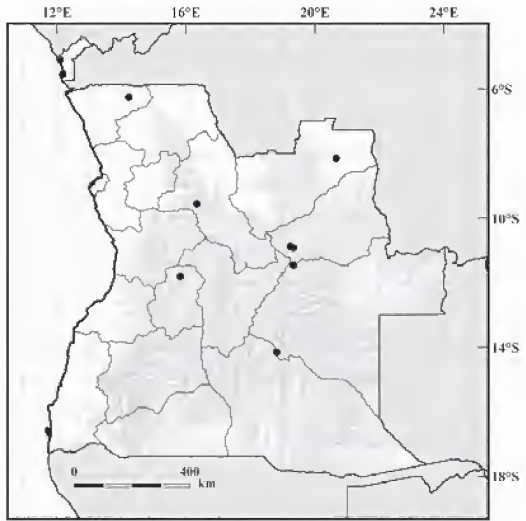
Chlorophis hoplogaster: Frade (1963:253), Laurent (1964a:103), Thys van den Audenaerde (1966:32).

Chlorophis irregularis shiranus: Thys van den Audenaerde (1966:32), Laurent (1964a:103).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widespread in sub-Saharan Africa from Cameroon to South Sudan and south to Angola in the west and western South Africa in the east.

Occurrences in Angola (Map 358): The species occurs appears to be widespread, particularly in the central and northern regions of Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615; Bocage 1882b:6, 1895a:85); “Cabinda” [-5.55000, 12.18333] (Bocage 1895a:85). **Zaire:** “S. Salvador do Congo” [-6.26667, 14.23333] (Bocage 1887a:186; 1895a:86). **Lunda Norte:** “Camissombo” [-8.15000, 20.65000] (Laurent 1964a:106). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:106); “sources du Cuílo, Alto Chicapa” [-10.91667, 19.33333] (Laurent 1964a:103); “Mutianvo” [-11.45000, 19.33333] (Themido 1941:10). **Malanje:** “Malanje” [-9.55000, 16.35000] (Bocage 1882b:6, 1895a:85; Monard 1937b:114). **Huambo:** “Bimbi” [-11.81667, 15.83333] (Monard 1937b:120). **Cuando** **Cubango:** “Cuito River system” (photographic record) [-14.14889, 18.81000] (Conradie et al. 2016:19).



MAP 358. Distribution of *Philothamnus hoplogaster* in Angola.

Taxonomic and distributional notes: The majority of Angolan literature records for *Philothamnus irregularis* (Leach, 1819) are probably referable to *P. angolensis* or *P. hoplogaster*, two species with which it has commonly been confused (Hughes 1985). *Philothamnus irregularis* is essentially a West Africa form ranging from Senegal to northern Cameroon and east to south-western Chad. Current literature, including Hughes (1985), Chippaux (2006), Trapé and Mané (2006) and Wallach et al. (2014), have not included Angola in the distribution of *P. irregularis*. Based largely on the maps of Hughes (1985), we have tentatively allocated literature records of *P. irregularis* to either *P. angolensis* or *P. hoplogaster*, although all of these should be verified and some may refer to other congeners. Hughes (1985) provided a distribution map for *Philothamnus hoplogaster* with literature records, museum records and previously unpublished D. G. Broadley records. Hughes (1985) provisionally accepted a record from Damaraland, northern Namibia as valid, however, we follow FitzSimons (1962) and Broadley (1983, 1990) in rejecting this. Only *P. angolensis* Bocage, 1882, *P. ornatus* Bocage, 1872, and *P. semivariegatus* (Smith, 1840) are confirmed to occur in Namibia.

Philothamnus nitidus loveridgei (Laurent, 1960)

LOVERIDGE'S GREEN BUSH SNAKE

Ahaetulla nitida Günther 1863:286. Syntypes: BMNH 1946.1.10.24 (collector Col. E. Sabine) and BMNH 1946.1.6.2 (formerly BMNH 71.4.21.5) (collector unknown). Type locality: “Demerara” [Guyana], in error, corrected to “Lagos” [Nigeria] by Boulenger (1894:101] *fide* Wallach et al. (2014:546) and “not known”.

Philothamnus nitidus loveridgei Laurent (1960:40). Holotype: MRAC (formerly RGMC) 18423 (collector R. F. Laurent). Type locality: “Itula, 650 m., Territoire de Shabunda, Kivu” [South Kivu Province, Democratic Republic of Congo].

Chlorophis nitidus loveridgei: Laurent (1964a:106), Thys van den Audenaerde (1966:33).

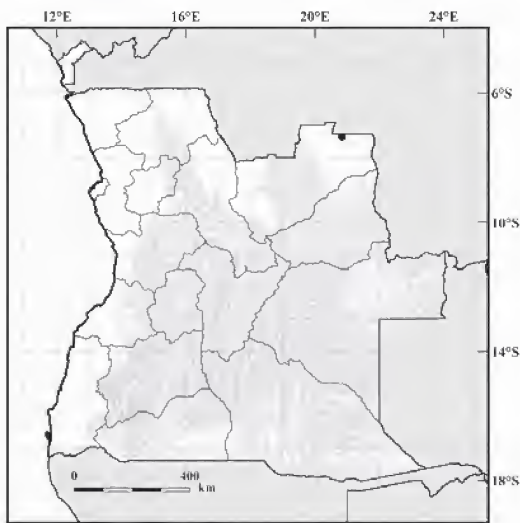
Philothamnus nitidus: Spwals et al. (2004:359), Chippaux (2006:132), Chirio and LeBreton (2007:516), Wallach et al. (2014:546).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from West and Central Africa, from Sierra Leone to the Democratic Republic of Congo and adjacent eastern Angola, east to southwestern Kenya and southwestern Tanzania. The subspecies *P. n. loveridgei* occupies the eastern portion of the range, from the eastern Congo eastwards, including all of the Democratic Republic of Congo and north-eastern Angola.

Occurrences in Angola (Map 359): The species has been recorded only from “Dundo,” Lunda Norte Province. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1964a:106; Thys van den Audenaerde 1966:33).

Taxonomic and distributional notes: Hughes (1985) noted that BMNH 1946.1.10.24 is one of the types of *P. nitidus*, the individual supposedly from Demerara, but that it is actually referable to the species from São Tomé, *P. thomensis* Bocage, 1882. Both BMNH 1946.1.10.28 and 1946.1.6.2, regarded as the syntypes of *P. nitidus* by Wallach et al. (2014) are indicated as types of *Ahaetulla lagoensis* in the BMNH register, with the explicit locality “Lagos.” This conflicts with the statement by Wallach et al. (2014) that BMNH 1946.1.10.28 is listed as a type of *P. nitidus* in the BMNH register. It is clear that some confusion still surrounds the types of *P. nitidus* and similar forms in the BMNH collection. The majority of recent authors (e.g., Spwals et al. 2004; Chippaux 2006; Chirio and LeBreton 2007) have not included Angola in the distribution of *Philothamnus nitidus*. However, Laurent (1964a), and later Thys van den Audenaerde (1966) reported specimens identified as *Philothamnus nitidus loveridgei* Laurent, 1960 from Dundo, and this locality was accepted and plotted by Hughes (1985). The nominotypical subspecies has not been reported from Angola, but according to Hughes (1985) it occurs very near to Cabinda. It is likely that *P. n. loveridgei* also occurs in Zaire Province, based on the proximity of records from the southern bank of the lower Congo River in the Democratic Republic of Congo.



MAP 359. Distribution of *Philothamnus nitidus loveridgei* in Angola.

***Philothamnus ornatus* Bocage, 1872**

ORNATE GREEN SNAKE

Philothamnus ornatus Bocage 1872:80. Syntypes: MBL [2 specimens from Huíla] (collector J.A. d’Anchieta) and MBL [from Cacheu] (collector C. Hopffer), all destroyed by fire 18 March 1978. Type locality: “Huilla,” Angola and “Cacheu, sur la côté de Guinée, Afrique occidentale” [= Cacheu], Guinea-Bissau, restricted to “Huilla, Angola,” Huíla Province by Bogert (1940:51).

Philothamnus ornatus: Bocage (1882b:16, 1895a:93, 1897a:200), Hellmich (1957b:65), Broadley (1990:236), Branch (1998:94), Spawls et al. (2004:359), Chippaux (2006:134), Chirio and LeBreton (2007:518), Wallach et al. (2014:546), Conradie et al. (2016:19).

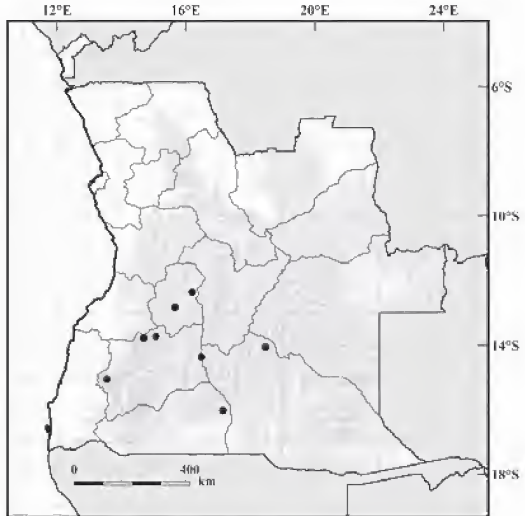
Chlorophis ornatus: Boulenger (1893:93, 1905:112), Monard (1937b:119), Bogert (1940:51), Frade (1963:252).

Philothamnus irregularis ornatus: Loveridge (1958:84, 1951:8).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is distributed from eastern Zimbabwe, Malawi, and eastern Zambia, through northern Botswana and the Caprivi Strip of Namibia to western Angola. Disjunct records exist from Cameroon and the far northeastern Democratic Republic of Congo.

Occurrences in Angola (Map 360): The species occurs from northwestern to southern Angola. **Huambo:** “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:65); “Huambo” [-12.83333, 15.66667] (Bogert 1940:51). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1882b:16, 1895a:93; Monard 1937b:114; Loveridge 1958:84); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:114, 119); “Huilla” [-15.05000, 13.55000] (Bocage 1872:80, 1882b:16, 1895a:93, 1897a:200; Monard 1937b:114; Loveridge 1951:8, 1958:84; Broadley 1990:236; Chippaux 2006:134; Chirio and LeBreton 2007:518; Wallach et al. 2014:546). **Cunene:** “Chimporo” [-16.03333, 17.15000] (Monard 1937b:114, 119; Loveridge 1958:84); “Cunene” (Bocage 1882b:17, 1895a:93; Monard 1937b:114; Loveridge 1958:84). **Cuando Cubango:**



MAP 360. Distribution of *Philothamnus ornatus* in Angola.

“Kutatu” [-14.36667, 16.48333] (Monard 1937b:114, 119; Loveridge 1958:84); “Cuito basin (24)” [-14.06622, 18.46722] (Conradie et al. 2016:8-9, 19). **Undetermined Locality:** “Between Benguela and Bihé” (Boulenger 1905:112; Monard 1937b:114; Loveridge 1958:84).

Taxonomic and distributional notes: Bocage (1872) gave “Cacheu” as the type locality of *P. ornatus* although both Bogert (1940) and Loveridge (1958) suspected that this locality corresponded to an error in labeling and considered “Huilla” as the type locality. Loveridge (1951) treated *P. ornatus* as a race of *Philothamnus irregularis* (Leach, 1819), whereas Hughes (1985) considered it a full species. Loveridge (1951) noted that Monard’s (1937b) specimens of *Chlorophis heterolepidotus* (Günther, 1863) from “Bimbi” and “Kutatu,” could possibly belong to this species (Loveridge 1958).

Philothamnus semivariegatus (Smith, 1840)

SPOTTED BUSH SNAKE

Dendrophis (Philothamnus) semivariegata Smith 1840: pls. 59–60, first of two unnumbered pages of accompanying text. Lectotype: NMSZ 1859.13.1257a, formerly RSM (collector A. Smith), designated by Bogert (1940:56). Type locality: “Bushman Flat” and “the country beyond Kurrichaine,” South Africa,” restricted to “Bushman Flat” by designation of lectotype.

Philothamnus Smithii: Bocage 1882b:12, fig. 5. Syntypes: MBL specimen numbers unknown (collectors Ferreira Borges [Bissau], d’Anchita [Catumbella, Huilla, Humbe, Capangombe, Maconjo]). Type locality: “Bissau (Guinée du Cap-Vert) et ... plusieurs localités d’Angola” (“Catumbella [Benguela Province] ... Huilla [Huilla Province] ... Humbe [Cunene Province] ... Capangombe [Namibe Province] ... Maconjo [Namibe Province]”).

Ahaetulla Bocagii Günther 1888:326. Holotype: BMNH specimen number unknown (collector Lieutenant V.L. Cameron). Type locality: “Angola.”

Philothamnus semivariegatus: Boulenger (1893:99), Bocage (1895a:90, 1896a:112), Ferreira (1897b:244), Monard (1937b:122), Schmidt (1933:13), Thys van den Audenaerde (1966:33), Hughes (1985:522),

Branch (1998:93), Chippaux (2006:129), Trapé and Mané (2006:140), Chirio and LeBreton (2007:520), Wallach et al. (2014:547).

Philothamnus semivariegatus semivariegatus: Mertens (1938:439), Laurent (1950a:8, 1954a:48); Loveridge (1951:11, 1957:262), Haacke (1985:7).

Philothamnus sp. (alf. *semivariegatus*): Thys van den Audenaerde (1966:33).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is extremely widely distributed in sub-Saharan Africa from Senegal and Niger to Sudan and Ethiopia, and south to South Africa.

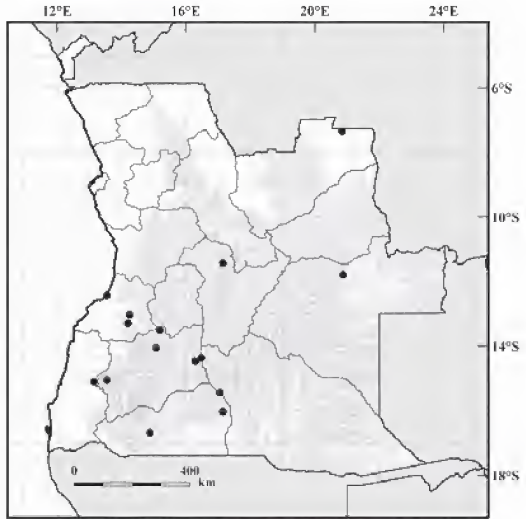
Ocurrences in Angola (Map 361): The species has been reported from across the entire country except parts of the northwest and the desert regions of far southwestern Angola.

Lunda Norte: “Dundo” [-7.36667, 20.83333] (Laurent 1950a:8, 1954a:48 1964a:107; Thys van den Audenaerde 1966:33). **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:107). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:13).

Benguela: “Catumbella” [-12.43333, 13.55000] (Bocage 1882b:12, 1895a:90); “Cubal” [-13.03333, 14.25000] (Mertens 1938:439); “Hanha” [-13.30000, 14.20000] (Bocage 1895a:90). **Huilla:** “Rio Cuce” [-13.51667, 15.20000] (Ferreira 1897b:244); “Quillengues” [-14.06667, 15.08333] (Bocage 1895a:90); “Kuvangu/Vila-da-Ponte” [-14.46667, 16.30000] (Monard 1937b:122);

“Huilla” [-15.05000, 13.55000] (Bocage 1882b:12, 1895a:90). **Namibe:** “Maconjo” [-15.01667, 13.20000] (Bocage 1882b:12); “Capangombe” [-15.10000, 13.15000] (Bocage 1895a:90; Haacke 1985:8). **Cunene:** “Chimporo” [-16.03333, 17.15000] (Monard 1937b:122); “Humbe” [-16.68333, 14.90000] (Bocage 1882b:12, 1895a:90; Boulenger 1893:99). **Cuando Cubango:** “Kutatu” [-14.36667, 16.48333] (Monard 1937b:122); “Kakindo” [-15.45000, 17.05000] (Monard 1937b:122).

Taxonomic and distributional notes: Bocage (1882b) mentioned specimens of *Philothamnus Smithii* from “Huilla”, “Humbe”, “Catumbella” and “Maconjo” and noted that the individuals from the last two localities resemble *Philothamnus variegata* (Smith, 1840) [= *Philothamnus semivariegatus* (Smith, 1840)]. However, due the impossibility of the comparison with *variegata* specimens at the time there was no confirmation of their specific identity. Later, Günther (1888) described a new species as *Ahaetulla Bocagii* based on a specimen from Angola without a precise location, collected by Lieutenant Cameron.



MAP 361. Distribution of *Philothamnus semivariegatus* in Angola.

Genus *Rharnophis* Günther, 1862

Rharnophis aethiopissa Günther, 1862

LARGE-EYED GREEN TREE SNAKE

Rharnophis aethiopissa Günther 1862:129, pl. 10. Holotype: BMNH 1946.1.4.99 (formerly BMNH 61.12.30.61) (don. Capt. R.H. Beddome). Type locality: “West Africa.”

Rharnophis ituriensis Schmidt (1923:81, fig. 4). Holotype: AMNH R-12505 (collector H. Lang and J.P. Chapin). Type locality: “Niapu” (Schmidt 1923:81-82), Democratic Republic of Congo.

Rhahnophis aethiopissa: Boulenger (1915:206), Roux-Estève (1965:65), Broadley and Howell (1991:66), Broadley and Wallach (2002:64), Spawls et al. (2004:366), Wallach et al. (2014:633).

Rhahnophis aethiopissa aethiopissa: Hellmich (1957b:66).

Rhahnophis aethiopissa ituriensis: Laurent (1950a:8, 1954a:50, 1964a:108), Thys van den Audenaerde (1966:33).

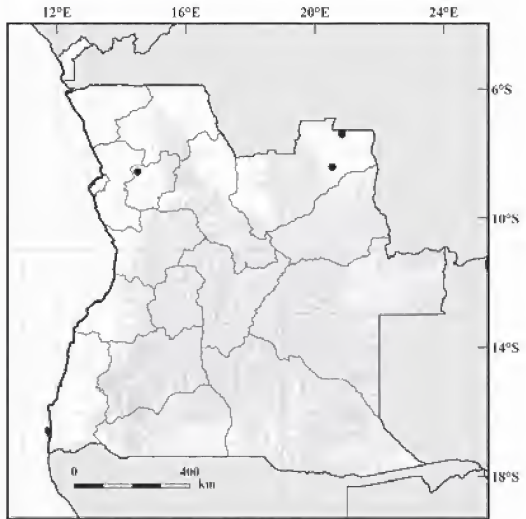
Tharsops aethiopissa: Chippaux (2006:109).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Guinea east to the Democratic Republic of the Congo, Rwanda, Uganda, and western Kenya, and south to northern Angola and northwestern Zambia.

Occurrences in Angola (Map 362): The species occurs in the northern Angola including the Cabinda enclave. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:50, 1964a:108); “sur un arbuste dans la forêt des sources de la Mussungue (affluent de la Lua-chimo) près de Dundo” [-7.41667, 20.83333] (Laurent 1950a:8, Thys van den Audenaerde 1966:33); “Calonda, Camissombo” [-8.41667, 20.53333] (Laurent 1964a:108). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:66).

Taxonomic and distributional notes: Roux-Estève (1965) placed the subspecies *Rhahnophis aethiopissa ituriensis* Schmidt, 1923 in the synonymy of the typical form.



MAP 362. Distribution of *Rhahnophis aethiopissa* in Angola.

Genus *Scaphiophis* Peters, 1870

Scaphiophis albopunctatus Peters, 1870

AFRICAN SHOVEL-NOSED SNAKE

Scaphiophis albopunctatus Peters 1870:645, pl. 1, figs. 4, 4a–4c. Holotype: ZMB 6945 (collector Jahn). Type locality: “Keta (Guinea)” [= Keta, Ghana] *fide* Wallach et al. 2014:650].

Scaphiophis albopunctatus: Laurent (1950a:9), Broadley (1994:4), Chirio and LeBreton (2007:546), Wallach et al. (2014:650), Branch and Conradie (2015:200).

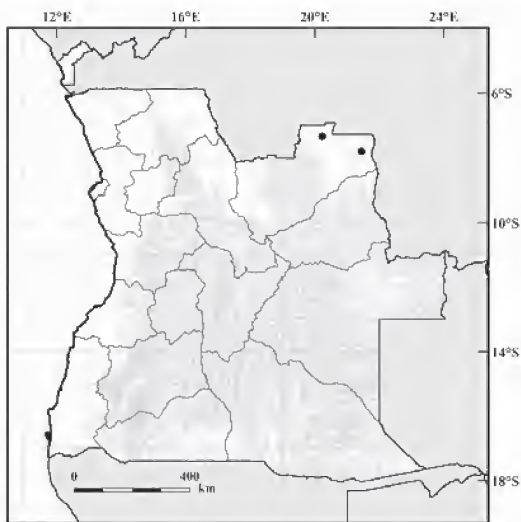
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is from northern Zambia and southern Democratic Republic of Congo to Kenya and South Sudan in the east and Ghana in the west.

Occurrences in Angola (Map 363): The species occurs in the extreme northeast of the country in Lunda Norte Province. **Lunda Norte:** “Capaia” [-7.33556, 20.21681] (Branch and Conradie 2015:200); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:9).

Taxonomic and distributional notes: Peters’ (1870) type locality of Keta, Guinea has caused a great deal of confusion. Loveridge (1936a) accepted the locality as being “Kita, Guinea” [= Kita, Mali]. Hughes and Barry (1969), Broadley (1994) and Wallach et al. (2014) all interpreted the locality as being Keta [= Kete], Ghana. However, there is indeed a Keta, Guinea as well, although it is small and unlikely to have been the source of Peters’ type. Further, as noted by Hughes and Barry (1969), the collector, Jahn, was based at the Bremen Mission in Keta, Ghana. Wallach et al. (2014) noted several occurrences of the species west of Ghana, the limit of the

species according to Broadley (1994). These may well be the result of continuing confusion over the placement of Keta. Given the localities known from Lunda Norte, it seems likely that the species occurs in other northern regions of Angola.



MAP 363. Distribution of *Scaphiophis albopunctatus* in Angola.

Genus *Telescopus* Wagler, 1830

Telescopus finkeldeyi Haacke, 2013

Telescopus finkeldeyi Haacke 2013:281. Holotype: TM 53542 (collector J.A. van Rooyen). Type locality: “Rössing Uranium mine area, Swakomund [sic] district (2214Db) Namibia.”

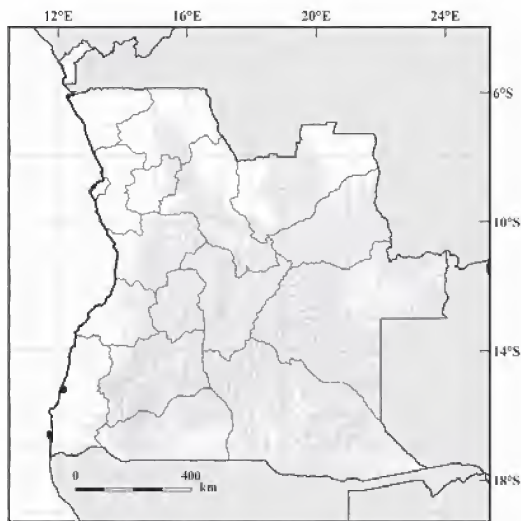
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Angola and Namibia.

Occurrences in Angola (Map 364): The species occurs in southwestern Angola. **Namibe:** “5 km north Namibé” [-15.20000, 12.15000] (Haacke 2013:285).

Taxonomic and distributional notes: Some earlier records of *T. semiannulatus polystrictus* in Namibia actually refer to this recently described species.

DAMARA TIGER SNAKE



MAP 364. Distribution of *Telescopus finkeldeyi* in Angola.

Telescopus semiannulatus semiannulatus Smith, 1849

COMMON TIGER SNAKE

Telescopus semiannulatus Smith 1849: pl. 72, first of two unnumbered pages of accompanying text. Holotype: BMNH 1946.1.2.55 (formerly BMNH 1871.4.21.1) (collector A. Smith) *fide* Wallach et al. (2014). Type locality: Not stated, “South Africa” by inference (Loveridge 1957:270).

Telescopus semiannulatus semiannulatus: Loveridge (1957:270), Hellmich (1957b:71), Thys van den Audenaerde (1966:34).

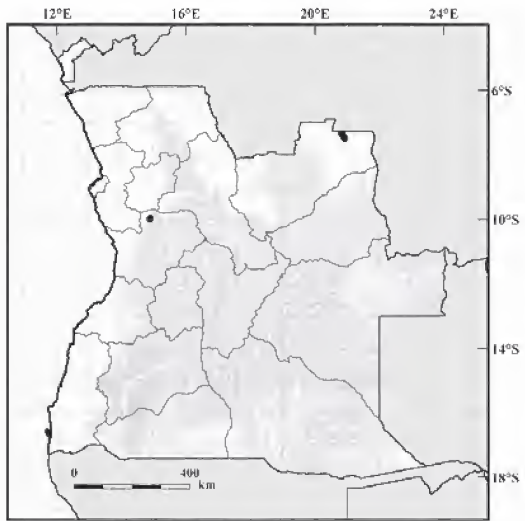
Telescopus semiannulatus: Wallach et al. (2014:698).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is widely distributed from Angola and the southern Democratic Republic of Congo to Kenya and Tanzania and south through Namibia northern and eastern South Africa.

Ocurrences in Angola (Map 365): The species occurs in northern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Thys van den Audenaerde 1966:34); “Mucoloje” [-7.50000, 20.91667] (Thys van den Audenaerde 1966:34). **Kwanza Sul:** “Libolo-Luati” [-9.98333, 14.90000] (Hellmich 1957b:71).

Taxonomic and distributional notes: FitzSimons (1937) stated that the type was not located in either the BMNH or RSM. Wallach et al. (2014) incorrectly stated that Loveridge (1957) had specified “Loanda, South Africa [= La Locanda, E Western Cape Prov., SW South Africa, 33°51’S, 22°31’E, elevation 350 m]” as the restricted type locality of *T. semiannulatus*. Loanda, is however, the locality listed in the BMNH register for BMNH 1871.4.21.1. The subspecies *T. s. polystictus* Mertens, 1954 occurs in western Namibia and the northwestern Northern Cape Province of South Africa. Although it approaches the Angolan border (Broadley 1990), there are no published records from Angola. Likewise, the nominotypical form occurs in the western Caprivi Strip, immediately adjacent to southeastern Angola and should therefore be expected in Cuando Cubango.



MAP 365. Distribution of *Telescopus semiannulatus semiannulatus* in Angola.

Genus *Thelotornis* Smith, 1849

Thelotornis capensis oatesi (Günther, 1881)

OATES' TWIG SNAKE

Thelotornis Capensis Smith 1849:19. Holotype: not located, presumed lost *fide* FitzSimons (1937) and Broadley (2001) (collector A. Smith). Type locality: “Kaffirland and the country towards Port Natal” [= Durban], South Africa.

Dryiophis oatesii Günther 1881:330, color pl. D. Holotype: BMNH 1946.1.9.76. (formerly BMNH 78.7.31.1) (collector C.G. Oates). Type locality: “Matabeleland” [= western Zimbabwe] *fide* Broadley (2001:61).

Dryiophis Kirtlandii: Bocage (1895a:119).

Thelotornis kirtlandii: Loveridge (1936a:39).

Thelotornis Kirtlandi: Monard (1937b:135).

Thelotornis capensis: Bogert (1940:70), Laurent (1954a:58), Wallach et al. (2014:714).

Thelotornis kirtlandii capensis: Loveridge (1944b:154, 1953a:277, 1957:275).

Thelotornis kirtlandii oatesii: Hellmich (1957b:69).

Thelotornis capensis oatesii: Laurent (1964a:116), Spawls and Branch (1995:23), Broadley (1979:130, 2001:61), Broadley and Wallach (2002:70), Broadley and Cotterill (2004:51), Eimermacher (2012:63), Bates et al. (2014:423), Conradie et al. (2016:19).

Global conservation status (IUCN): Least Concern.

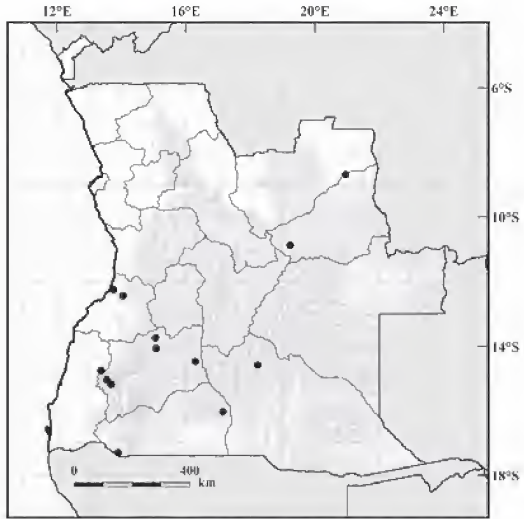
Global distribution: The species as a whole is known from Southern Angola and northern Namibia, west through northern Botswana, Zambia and southeast Democratic Republic of Congo to Zimbabwe, western Mozambique and Malawi, and south into the northeastern provinces of

South Africa. *Thelotornis capensis oatesi* occupies much of this range exclusive of South Africa, eastern Botswana and adjacent areas.

Occurrences in Angola (Map 366): The subspecies occurs in southern and central-east Angola. **Lunda Norte:** “Sombo” [-8.68333, 20.95000] (Laurent 1954:58). **Lunda Sul:** “Alto Chicapa” [-10.88333, 19.23333] (Laurent 1964a:116; Broadley 2001:68). **Benguela:** “Quisange” [-12.43333, 14.05000] (Bocage 1895a:119; Loveridge 1944b:159); “Hanha” [-12.25000, 13.75000] (Bogert 1940:70; Loveridge 1944b:159; Broadley 2001:68). **Huila:** “Caconda” [-13.73333, 15.06667] (Loveridge 1936a:40, 1944b:159; Broadley 2001:68); “Quillengues” [-14.06667, 15.08333] (Bocage 1895a:119; Loveridge 1944b:159); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:135; Loveridge 1944b:159); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:119; Broadley 2001:68), “Jôa Almeida” [-15.18333, 13.68333] (Broadley 2001:68).

Namibe: “Biballa” [-14.76667, 13.36667] (Bocage 1895a:119; Loveridge 1944b:159). **Cunene:** “Chimporo” [-16.03333, 17.15000] (Monard 1937b:135; Loveridge 1944b:159); “Dorbush am Cunene, Chitado (thorny bush in Chitado)” [-17.30000, 13.90000] (Hellmich 1957b:69; Broadley 2001:68). **Cuando Cubango:** “Cuito basin (52)” [-14.59333, q] (Conradie et al. 2016:9, 12, 19). **Undetermined Locality:** “Rio Quando” (Bocage 1895a:119; Loveridge 1944b:159).

Taxonomic and distributional notes: Bocage (1895a) noted that some Angolan specimens in the Museu Bocage collections previously identified as *Dryiophis Kirtlandii* from “Quissange,” “Biballa,” “Rio Quando,” “Quillangues,” and “Huilla” resembled the individuals described by Günther (1881) as *Dryiophis Oatesi* from “Matabeleland,” Zimbabwe. Loveridge (1944b) considered two races of *Thelotornis kirtlandii* (Hallowell, 1844), one from the north as the typical form and one from the south as *Thelotornis kirtlandii capensis*, which might represent the southern records of Bocage (1895a) and Monard (1937b). This association should correspond to *Thelotornis capensis oatesi* as suggested by Loveridge (1953a) and represented in Broadley (1979). Broadley (1979) and Broadley and Wallach (2002) presented distribution maps but did not list the localities plotted. The status of *T. c. oatesi* as a valid taxon remains problematic and has not been resolved by morphological and genetic analyses (Eimermacher 2012).



MAP 366. Distribution of *Thelotornis capensis oatesi* in Angola.

Thelotornis kirtlandii (Hallowell, 1844)

FOREST TWIG SNAKE

Leptophis Kirtlandii Hallowell 1844:62. Holotype: ANSP 5271 (collector E. Blanding, don. W. Blanding).

Type locality: “Liberia, West Africa.”

Dryiophis Kirtlandii: Bocage (1866a:48).

Thelotornis Kirtlandii: Ferreira (1900a:52), Boulenger (1915:213), Parker (1936:125), Themido (1941:10), Laurent (1954a:59, 1964a:116), Thys van den Audenaerde (1966:34).

Thelotornis kirtlandii capensis: Loveridge (1944c:154).

Thelotornis kirtlandii kirtlandii: Loveridge (1944c:149, 1957:274), Hellmich (1957b:69).

Thelotornis kirtlandii: Spawls and Branch (1995:24), Broadley (2001:57), Broadley and Wallach (2002:69),

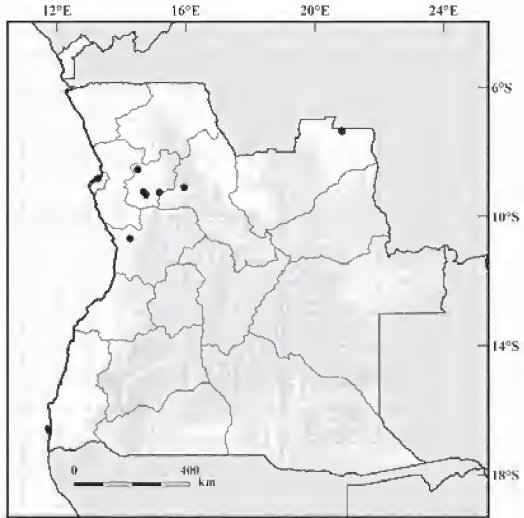
Eimermacher (2012:64), Broadley and Cotterill (2004:51), Spawls et al. (2004:390), Broadley and Cotterill (2004:51), Chirio and LeBreton (2007:552).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from from Guinea-Bissau east through forested areas of West Africa and the Congo basin to Uganda and South Sudan, south to northern Angola, northwestern Zambia and south-central Tanzania.

Occurrences in Angola (Map 367): The species occurs in the northern Angola. **Luan-da:** “Luanda” [-8.83333, 13.26667] (Ferreira 1900a:52; Themido 1941:10). **Lunda Norte:** “Ile Bena-Mai, riv. Luachimo, près de Dundo (Bena-Mai island)” [-7.35000, 20.83333] (Laurent 1954a:59; Broadley 2001:66); “Dundo” [-7.36667, 20.83333] (Broadley 2001:66). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Bocage 1866a:48, 1895a:119; Loveridge 1944b:154). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:69; Broadley 2001:66); “Ambaca” [-9.26667, 15.18333] (Ferreira 1900a:52); “Canhoca” [-9.25000, 14.68333] (Broadley 2001:66); “Cazengo” [-9.33333, 14.76667] (Ferreira 1900a:52; Loveridge 1944c:154). **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:125; Loveridge 1944c:154, 159; Broadley 2001:66).

Taxonomic and distributional notes: Broadley (1979) and Broadley and Wallach (2002) presented distribution maps but did not list the localities plotted.



MAP 367. Distribution of *Thelotornis kirtlandii* in Angola.

Genus *Thrasops* Hallowell, 1858

Thrasops flavigularis (Hallowell, 1852)

YELLOW-THROATED BOLD-EYED TREE SNAKE

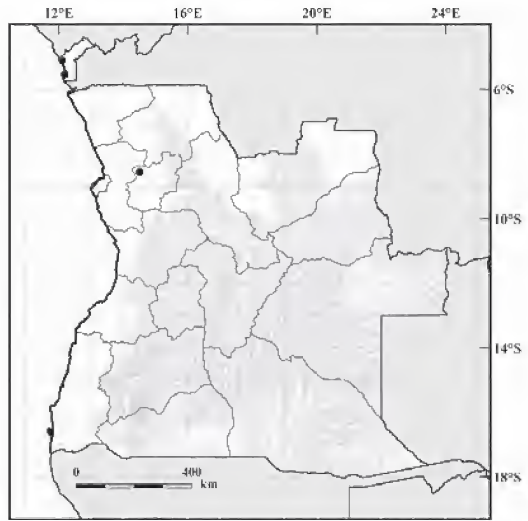
Dendrophis flavigularis Hallowell 1852b:205. Holotype: ANSP 5243 (collector H.A. Ford), lost *fide* Malnate (1971). Type locality: “Liberia, Western Africa,” in error, corrected to “Gabon” by Loveridge (1944b:132). *Thrasops flavigularis*: Peters (1877a:615), Bocage (1895a:97), Loveridge (1944c:132), Hellmich (1957b:65), Frade (1963:252), Broadley and Wallach (2002:63), Chippaux (2006:108), Chirio and LeBreton (2007:558), Wallach et al. (2014:716).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southwestern Nigeria through extreme eastern Democratic Republic of Congo and northwestern Angola. Also on Bioko Island, Equatorial Guinea.

Occurrences in Angola (Map 368): The species occurs in the northwestern Angola including the Cabinda enclave. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615; Bocage 1895a:97; Loveridge 1944c:134); “Cabinda” [-5.55000, 12.18333] (Frade 1963:252). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:65).

Taxonomic and distributional notes: None.



MAP 368. Distribution of *Thrasops flavigularis* in Angola.

***Thrasops jacksonii* Günther, 1895**

BLACK TREE SNAKE

Thrasops Jacksonii Günther 1895:528. Holotype: BMNH 1946.1.4.8 (formerly BMNH 94.2.1.7) (collector F.J. Jackson). Type locality: “Kavirondo” [= southern Western and Nyanza provinces], Kenya.

Thrasops jacksoni jacksoni: Thys van den Audenaerde (1966:33).

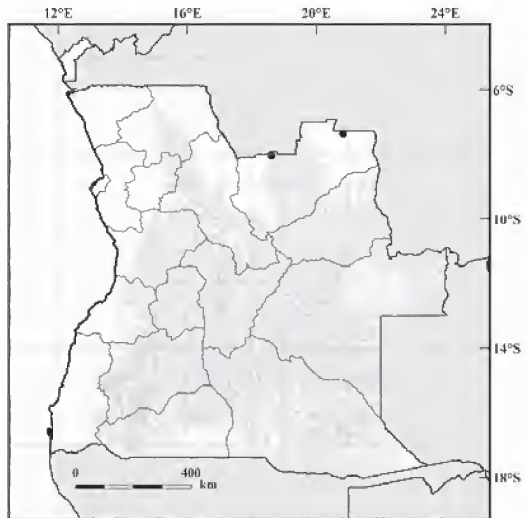
Thrasops jacksonii: Broadley and Wallach (2002:64), Broadley et al. (2003:214), Spawls et al. (2004:365), Chirio and LeBreton (2007:560), Wallach et al. (2014:716).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from southern Cameroon, east through the Congo basin and southern Central African Republic to Uganda and western Kenya and south to northwestern Zambia, northeastern Angola, and the former Katanga Province in the Democratic Republic of Congo.

Occurrences in Angola (Map 369): The species occurs in northeastern Angola. **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Thys van den Audenaerde 1966:33), “Riv. Camalia” [-8.05000, 18.61667] (Thys van den Audenaerde 1966:33).

Taxonomic and distributional notes: The Angolan records of Thys van den Audenaerde (1966) appear to be the only confirmation of the occurrence of *Thrasops jacksonii* in Angola.



MAP 369. Distribution of *Thrasops jacksonii* in Angola.

Genus *Toxicodryas* Hallowell, 1857

Toxicodryas blandingii (Hallowell, “1844” 1845)

BLANDING’S TREE SNAKE

Dipsas Blandingii Hallowell “1844” 1845:170. Holotype: ANSP 10083 (collector E. Blanding, don. W. Blanding), lost *fide* Hughes and Barry (1969:1020). Type locality: “Liberia, West Africa.”

Boiga blandingii: Laurent (1950a:9, 1954a:57, 1964a:109), Thys van den Audenaerde (1966:34), Spawls and Branch (1995:26), Broadley and Cotterill (2004:50), Spawls et al. (2004:373).

Toxicodryas blandingii: Trapé and Mane (2006:168), Chirio and LeBreton (2007:562), Wallach et al. (2014:719).

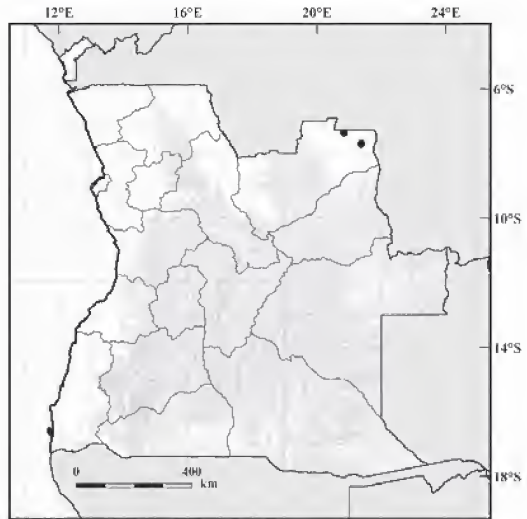
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Senegal and Guinea, east to western Kenya, south to northern Angola, the southern Democratic Republic of Congo, and northern Zambia.

Occurrences in Angola (Map 370): The species is known from northeastern Angola.

Lunda Norte: “Dundo” [−7.36667, 20.83333] (Laurent 1950a:9, 1954a:57, 1964a:109; Thys van den Audenaerde 1966:34); “Andrada” [−7.70000, 21.38333] (Laurent 1964a:109).

Taxonomic and distributional notes: Some authors including Peters (1877a), Bocage (1895a), Parker (1936) and Hellmich (1957b) erroneously reported this species from northwestern Angola. Records from “Chinchoxo,” “Piri-Dembos,” and “Quirimbo” formerly identified as *T. blandingii* should be assigned to *Toxicodryas pulverulenta* (Fischer, 1856).



MAP 370. Distribution of *Toxicodryas blandingii* in Angola.

Toxicodryas pulverulenta (Fischer, 1856)

FISCHER’S CAT SNAKE

Dipsas pulverulenta Fischer 1856:81, pl. 3, figs. 1a–1c. Lectotype: ZMH 4376, formerly ZMH 339 (collector Dr. Davis), designated by Wallach et al. (2014:720). Type locality: “Edina, Grand Bassa County in Liberia (West-Afrika),” corrected to “St. Thomé,” São Tomé and Príncipe, Gulf of Guinea” by Ladiges *in* Hughes and Barry (1969:1020), which is itself in error; the original type locality is probably correct as stated (see notes below).

Dipsas pulverulenta: Peters (1877a:615), Bocage (1887a:186, 1895a:123).

Dipsas Blandingii: Peters (1877a:615), Bocage (1895a:124).

Boiga blandingi: Parker (1936:125).

Boiga blandingii: Hellmich (1957b:67), Loveridge (1957:268).

Boiga pulverulenta: Parker (1936:109), Hellmich (1957b:68), Loveridge (1957:269), Frade (1963:252), Spawls et al. (2004:374).

Toxicodryas pulverulenta: Chippaux (2006:155), Chirio and LeBreton (2007:564).

Toxicodryas pulverulentus: Wallach et al. (2014:719).

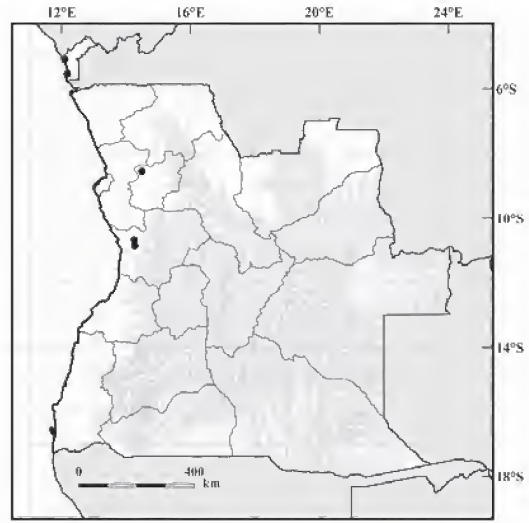
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from West and Central Africa, from Guinea to Cameroon, east to Uganda and Kenya, and south to the southern Democratic Republic of Congo and Angola.

Occurrences in Angola (Map 371): The species is known from northwestern Angola. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:615; Bocage 1887a:186, 1895a:123-124); “Cabinda” [-5.55000, 12.18333] (Frade 1963:252). **Kwanza Norte:** “Piri-Dembos” [-8.56667, 14.50000] (Hellmich 1957b:67-68). **Kwanza Sul:** “Quirimbo” [-10.68333, 14.26667] (Parker 1936:125); “Congulu” [-10.86667, 14.28333] (Parker 1936:125).

Taxonomic and distributional notes:

Authors including Peters (1877a), Bocage (1895a), Parker (1936) and Hellmich (1957b) confused this species with *Toxicodryas blandingii* (Hallowell, “1844” 1845), resulting in erroneous estimations of species distributions. *Toxicodryas blandingii* is limited to extreme northeastern Angola (Spawls and Branch 1995; Wallach et al. 2014) whereas the distribution of *T. pulverulenta* (Fischer, 1856) comprises a large portion of the northwestern parts of the country. In the original description Fischer (1856) referred to two specimens (one subsequently lost *fide* Hallermann 1998) from “Edina, Grand Bassa County in Liberia (West-Afrika),” collected by Dr. Davis and donated to the Hamburg Museum. Hughes and Barry (1969), following a personal communication from the curator at that time, Werner Ladiges, corrected the type locality of *Toxicodryas pulverulenta* to “St. Thomé,” presumably São Tomé and Príncipe, Gulf of Guinea. Schätti and Loumont (1992) and Wallach et al. (2014) followed Hughes and Barry (1969) and Chippaux (2006) incorrectly referred to “Saint Thomé, Liberia” as the type locality of the species (there is no locality with this or a similar name in Liberia). The suggestion by Ladiges was certainly the result of a labeling mistake. The species has never subsequently been found on São Tomé, despite recent extensive collecting by the California Academy of Sciences and Museu Nacional de História Natural e da Ciência, and it has never been cited in any of the works on the herpetofauna of the island (e.g., Bocage 1879, 1886b, 1886c, 1886d, 1890, 1905; Greef 1884; Bedriaga 1892; Manaças 1958; Capocaccia 1961; Schätti and Loumont 1992; Nill 1993; Ceríaco et al. 2018). Therefore, we recommend that original type locality, “Edina, Liberia,” should stand as is.



MAP 371. Distribution of *Toxicodryas pulverulenta* in Angola.

Family Natricidae Bonaparte, 1838

Genus *Limnophis* Günther, 1865

Limnophis bicolor Günther, 1865

BICOLORED SWAMP SNAKE

Limnophis bicolor Günther 1865b:96, pl. 2, fig. C. Syntypes: BMNH 1946.1.14.53–54 (formerly BMNH 64.10.28.16) (collector F.A.P. Bayão, don. J.V. Barboza du Bocage) [2 specimens]. Type locality: “provincia Duque de Bragança (Angola)” [= Calandula], Malanje Province, Angola.

Limnophis bicolor: Bocage (1866a:47, 1866b:68, 1879b:95), Bogert (1940:36), Hellmich (1957b:63), Mertens (1963:438), Broadley (1974:8), Branch (1998:82), Broadley et al. (2003:175), Wallach et al. (2014:376).

Helicops bicolor: Bocage (1895a:75, 1896a:112, 1897a:200), Boulenger (1905:112, 1915:201), Schmidt (1933:12), Monard (1937b:116).

Limnophis bicolor bicolor: Laurent (1964a:100).

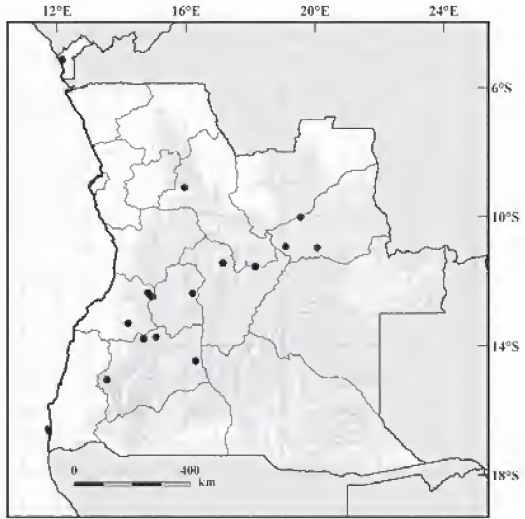
Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from the southern Democratic Republic of Congo, the Angolan highlands, western Zambia and westernmost Zimbabwe.

Occurrences in Angola (Map 372): The species is known from mainly from central Angola. **Cabinda:** “Luango” [-5.15000, 12.16667] (Bocage 1895a:75). **Lunda Sul:** “Poste de Cacolo, Alto Cuílo, dans une petit grotte d’où sort une cascade sur le cours du Ná-Ipanha, affluente du Cuílo” [-10.01667, 19.55000] (Laurent 1964a:100); “Marais du Khôka, affluente du Kutele, sous-affluent du Cuango, Alto Cuílo” [-10.93333, 19.08333] (Laurent 1964a:100); “Tyihumbwé” [-10.96667, 20.06667] (Monard 1937b:116). **Malanje:** “Duque de Bragança” [-9.10000, 15.95000] (Günther 1865b:96; Bocage 1866a:47, 1866b:68, 1895a:75, 1897a:200; Mertens 1963:437); “Rio Loando” [-11.55000, 18.15000] (Bocage 1879b:95). **Bié:** “Chitau” [-11.43333, 17.15000] (Schmidt 1933:12).

Huambo: “Bela-Vista” [-12.36667, 16.20000] (Hellmich 1957b:63; Mertens 1963:437). **Benguela:** “Cahata” [-12.35000, 14.81667] (Bocage 1895a:75); “Quindumbo” [-12.46667, 14.9333] (Bocage 1895a:75); “Hanha” [-13.30000, 14.20000] (Bocage 1896a:112). **Huíla:** “Caconda” [-13.73333, 15.06667] (Bocage 1895a:75); “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:116); “Kuvangu” [-14.46667, 16.30000] (Monard 1937b:116); “Huilla” [-15.05000, 13.55000] (Bocage 1895a:75); “Kakulakaze (affluente du Kului)” (Monard 1937b:116).

Taxonomic and distributional notes: Thys van den Audenaerde (1965) considered the occurrence of the species in the province of Bas-Congo, Democratic Republic of Congo as doubtful.



MAP 372. Distribution of *Limnophis bicolor* in Angola.

Limnophis bangweolicus (Mertens, 1936)

BANGWEULU WATER SNAKE

Helicops bangweolicus Mertens 1936:284. Holotype: SMF 22172 (collector F. Haas). Type locality: “Nsombo, Nordende des Bangweolo-Sees, Nord Rhodesien” [= Nsombo, Lake Bangweulu], Zambia.

Limnophis bicolor bangweolicus: Laurent (1964a:100).

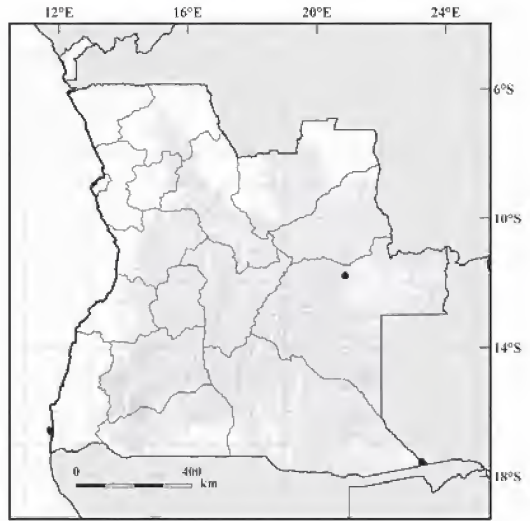
Limnophis bangweolicus: Branch (1998:82), Broadley et al. (2003:175), Broadley and Cotterill (2004:50), Wallach et al. (2014:376), Conradie et al. (2016:19).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from Zambia, west to the former Katanga Province of the Democratic Republic of Congo and eastern Angola as well as the Caprivi Strip, Namibia, northern Botswana and western Zimbabwe.

Occurrences in Angola (Map 373): The species is known from just two published records, although it probably occurs in other regions of eastern Angola. **Moxico:** “environs du lac Calundo” [-11.80000, 20.86667] (Laurent 1964a:100). **Cuando Cubango:** “floodplain of the Cuando River (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9, 10, 22).

Taxonomic and distributional notes: None.



MAP 373. Distribution of *Limnophis bangweolicus* in Angola.

Genus *Natriciteres* Loveridge, 1953

Natriciteres bipostocularis Broadley, 1962

SOUTHWESTERN FOREST MARSH SNAKE

Natriciteres olivaceus bipostocularis Broadley 1962b:785. Holotype: NMSR/M 3524 (collector L.D.E.F. Vesey-FitzGerald). Type locality: "Chisansa, Abercon, Northern Rhodesia" [= Mbala], Zambia.

Coronella olivacea: Peters (1882c:115).

Mizodon olivaceus: Bocage (1895a:74).

Tropinodotus fuliginoides: Monard (1937b:113, 115).

Neusterophis olivaceus uluguruensis: Bogert (1940:35).

Natriciteres olivaceus uluguruensis: Hellmich (1957b:62), Loveridge (1957:256).

Natriciteres olivacea bipostocularis: Broadley (1963:5, 1966d:7).

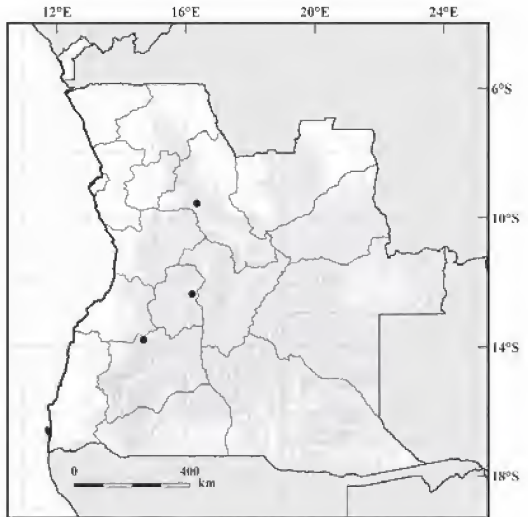
Natriciteres variegata bipostocularis: Branch (1998:81).

Natriciteres bipostocularis: Broadley et al. (2003:172), Broadley and Cotterill (2004:50), Wallach et al. (2014:465).

Global conservation status (IUCN): Not Evaluated.

Global distribution: The species is known from northeastern Zambia, extending west through the southern Democratic Republic of Congo to the highlands of central Angola.

Ocurrences in Angola (Map 374): The species occurs in the central-western in Angolan highlands. **Malanje:** "Malanje" [-9.55000, 16.35000] (Peters 1882c:115; Bocage 1895a:74; Broadley 1966d:7). **Huambo:** "Bela Vista" [-12.36667, 16.20000] (Hellmich 1957b:62; Broadley 1966d:7).



MAP 374. Distribution of *Natriciteres bipostocularis* in Angola.

Huíla: “Kalukembé” [-13.78333, 14.68333] (Monard 1937b:113, 115 Broadley 1966d:7).

Taxonomic and distributional notes: Described by Broadley (1962d) as a subspecies of *Natriciteres olivacea* (Peters, 1845) from northeastern Zambia, the species was first considered as a montane race close to *Natriciteres olivacea ulugurensis* Loveridge, 1935, itself now regarded as a synonym of *N. variegata* (Peters, 1861) or as a subspecies of *N. variegata* (Peters, 1861) (Broadley 1966d; Broadley et al. 2003; Broadley and Cotterill 2004). Recently, *N. bipostocularis*, *N. pembana* (Loveridge, 1935) and *N. sylvatica*, Broadley, 1966, the last two also once considered subspecies of *N. variegata*, were recognized as full species (Broadley et al. 2003; Broadley and Cotterill 2004).

Natriciteres olivacea (Peters, 1854)

OLIVE MARSH SNAKE

Coronella olivacea Peters 1854:622. Holotype: ZMB 4803 (collector W.C.H. Peters). Type locality: “Tette” [= Tete], Mozambique.

Neusterophus atratus (Peters 1877a:614). Holotype, ZMB 9177 (collector Africanische Gesellschaft). Type locality: “Chinchoxo (Westafrika)” [= Chinchoxo], Cabinda enclave, Angola.

Coronella olivacea: Bocage (1866a:47, 1866b:66).

Coronella (Mizodon) olivacea: Peters (1877a:614).

Tropidonotus olivaceus: Boulenger (1915:112).

Neusterophis olivaceus olivaceus: Laurent (1950a:7).

Natriciteres olivaceus olivaceus: Laurent (1954a:44).

Natriciteres olivaceus olivacea: Hellmich (1957b:62), Loveridge (1957:256).

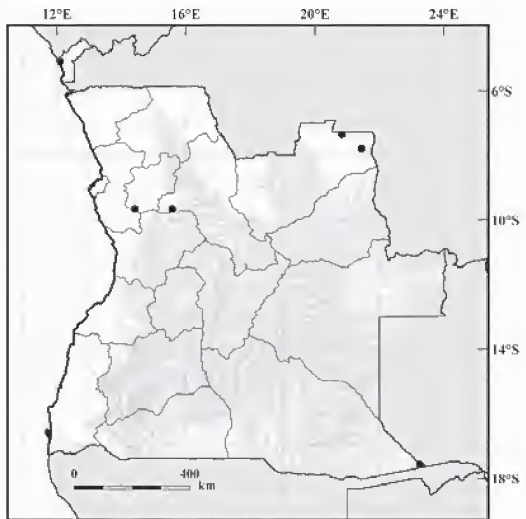
Natriciteres olivacea: Broadley (1966d:9), Broadley and Cotterill (2004:50), Chirio and LeBreton (2007:496), Wallach et al. (2014:465), Conradie et al. (2016:22).

Global conservation status (IUCN): Least Concern.

Global distribution: The species is known from Senegal east to the Sudan and Ethiopia, south through southern Somalia to southern Mozambique and west through Zimbabwe, northern Botswana and the Caprivi Strip to Gabon and Angola.

Occurrences in Angola (Map 375): The species occurs throughout more mesic parts of Angola, although most records are from the north of the country. **Cabinda:** “Chinchoxo” [-5.10000, 12.10000] (Peters 1877a:614; Loveridge 1957:256). **Lunda Norte:** “Dundo” [-7.36667, 20.83333] (Laurent 1954a:44; Broadley 1966d:9); “Muita (Luembe E)” [-7.80000, 21.45000] (Laurent 1950a:7, 1954a:44; Broadley 1966d:9). **Kwanza Norte:** “Dondo” [-9.66667, 14.41667] (Hellmich 1957b:62; Broadley 1966d:9). **Malanje:** “Pungo-Andongo” [-9.66667, 15.58333] (Bocage 1895a:74; Boulenger 1905:112; Broadley 1966b:9). **Cuando Cubango:** “flood-plains of the Cuando River (44a)” [-17.57333, 23.26000] (Conradie et al. 2016:9, 10, 22). **Undetermined Locality:** “North of Cuanza River” (Broadley 1966db:9).

Taxonomic and distributional notes: A recent record from Cuando Cubango (Conradie et al. 2016) represents the first published occurrence of the species from the south of Angola.



MAP 375. Distribution of *Natriciteres olivacea* in Angola.

ACKNOWLEDGMENTS

The present work would not have been possible without the help and support of many people and institutions. We apologize in advance if we have inadvertently omitted anyone from the list that follows.

From North American institutions, we particularly thank to the curators, collection managers and researchers of all institutions visited or consulted, namely Ned Gilmore (ANSP), Darrel Frost, Frank Burbrink, David Kirziran and Arianna Kuhn (AMNH), Jens Vindum, Lauren Scheinberg, Alan E. Leviton and Robert C. Drewes (CAS), James Hanken, Jonathan Losos, José Rosado, Joe Martinez, and Linda Ford (MCZ), Carol Spencer, Michelle Koo and Jimmy McGuire (MVZ), Alan Resetar (FMNH), Steve Rogers (CM), and Bob Reynolds, Addison Wynn, Rayna Bell and Roy McDiarmid (USNM).

Important contributions were made by friends and colleagues in Portuguese institutions. As the present Atlas was originally presented as a M.Sc. thesis in the Conservation Biology M.Sc. program from Universidade de Évora, Évora, by the first author, we want to thank the professors in that program, and particularly João Rabaça and Paulo Sá-Sousa for their support and comments during the initial stages of this Atlas. From the Museu Nacional de História Natural e da Ciência, we thank the staff and all of our colleagues, in particular Cristiane Bastos-Silveira, Isabela Queiroz, Alexandra Cartaxana, Alexandra Marçal, Maria Judite Alves and Luis Filipe Lopes for their constant support for this project. From the Museu de História Natural da Universidade do Porto, we thank the director of the institution, Nuno Ferrand de Almeida, for providing access to the collection under his responsibility, and we particularly thank our friend Luzia Sousa, former curator of the zoological section, for her outstanding knowledge and dedication to the preservation of such an admirable collection. From the former Instituto de Investigação Científica Tropical, we thank Luis Mendes and Bivar de Sousa for their support and valuable discussions and suggestions during our data collection and research on both the herpetological collection and archive of the institution. From the Museu da Ciência of Universidade de Coimbra, we thank the director, Carlota Simões, and the manager of the zoological collections, Ana Rufino, for their support during our visit to their museum. Other private individuals, especially João Crawford-Cabral and David Luna de Carvalho provided important data and information on topics related to the biogeography and history of science of Angola.

Several colleagues and friends from German institutions provided both specimen access and data regarding their collections and research in Angola and Africa, these include Gunther Köhler and Linda Acker (SMF), Uwe Fritz, Raffael Ernst and Markus Auer (SMF), Jakob Hallerman (ZMH), Michael Franzen and Frank Glaw (ZSM), Frank Tillack, Rainer Günther and Mark-Oliver Rödel (ZMB), Wolfgang Böhme (ZFMK), Fritz Geller-Grimm (MWNH) and Philipp Wagner (now of the Allwetterzoo, Münster). From France, we thank Alain Dubois, Annemarie Ohler, Roger Bour and Marc Cugnet (MNHN) for their continued support, shared ideas and access to their rich collections. From Switzerland, we thank Andreas Schmitz (MHNG) as well as Arnaud Maeder (MHNC) for providing access to the collections under their care, and Urs Wüest (NMBA) for collection data. From the United Kingdom, Patrick Campbell and Jeff Streicher (BMNH) responded promptly and courteously to numerous requests for information and hosted our visits to London. From Belgium, we thank Danny Meirte (MRAC) and Georges Lenglet (IRSNB). From Austria we thank Heinz Grillitsch and Silke Schweiger (NHMW), from The Netherlands, Pim Arntzen and Esther Dondorp (RMNH). In Sweden, we thank Gören Nilson (GNM), Sven Kullander (NRM) and Ericas Mejlon (UUMZ), and in Italy, Stefano Scali (MSNM), Franco Andreone (MZUT) and the staff of MZUB for data on specimens in their care.

From South Africa, we thank Michael Francis Bates (NMB), Bill Branch and Werner Conradie (PEM), Lauretta Mahlangu, Lemmy Mashinini and Wulf Haacke (TM), Jofred Opperman (SAM), and Beryl Wilson (MMK) for information on their collections and other relevant data regarding Angolan and Southern Africa herpetofauna. From Zimbabwe, Shiela Broadley and the late Don Broadley (NMZB), and from Namibia, Mathilda Awases and Eugene Marais (SMNW).

From Angola, we would like to thank the Baptista family especially to Álvaro, “Varito” and young Pedro, for their outstanding and incredibly organized logistical help during our field surveys in Namibe Province and tourism operator Cândido Carneiro for kindly providing Figure 8. From the Faculdade de Ciências of Universidade Agostinho Neto, we thank João Seródio de Almeida, Michel Morais, Soki Kuedikuenda and Filomena Mateus, with whom we have actively collaborated and exchanged ideas regarding Angolan biodiversity. Soki Kuedikuenda was also the former director of INBAC, with whom the current collaboration was initiated. From the Universidade Metodista de Angola, we thank Luis Sebastião, Diogo Figueiredo and Teresa da Silva Neto, dean of the university, for their institutional support at the beginning of this project. From the Museu Nacional de História Natural, we want to thank both the former and current directors of the institution, Francisca da Costa and Belmira Seco de Oliveira Gumbé, respectively, and all of their staff for their enthusiastic and professional support during our visits to their collections and also during various public lectures held in the institution. From the Museu do Dundo, we thank the director, Fonseca Sousa and his staff for opening the doors of their extraordinary collection and allowing us to study Raymond Laurent’s type material. Our acknowledgments extend to the Ministry of Culture, specifically to her Excellency the Minister of Culture, Carolina Cerqueira, and to the National Director of the Museums of Angola, Ziva Domingos, for allowing our investigations in both aforementioned institutions. From the Gabinete de Aproveitamento do Médio Kwanza (GAMEK), we thank Rafael Neto for his support during field surveys in the Laúca Dam area, which resulted in the collection of important specimens. Alice Ponciano (Odebrecht), Cristina Rebelo (EnvGreen) and the environment team of Laúca Dam (Vicente José, Helena Pinto, et al.) provided invaluable support and friendship during the aforementioned surveys. The authors also wish to thank Daniel “Gástrula” Machado, Almeida José, Iracelma Machado, Fidel Viegas, and Sara and David Elizalde for their friendship and camaraderie. The Embassy of the United States of America in Luanda, and particularly Gustavo Guerrero and Todd Katsche, have provided institutional help whenever needed.

From the Ministry of Environment, we wish to thank to both the former and current Ministers of the Environment, Their Excellencies Maria de Fátima Jardim and Paula Francisco Camuhoto, respectively, for their institutional support and permission to conduct research in the country. In addition, the former National Director for Biodiversity, now Secretary of State for Biodiversity, Joaquim Manuel offered his support since the beginning of the Atlas project. Provincial and communal governors have facilitated our field-work across various provinces of the country. The current National Director for Biodiversity, Nascimento António, must also to be thanked. We especially want to acknowledge the friendship and support of our colleagues from the Instituto Nacional da Biodiversidade e Áreas de Conservação (INBAC), namely its current director, Aristófanes Pontes, and vice-director, Maria Loa, and their colleagues Sango de Sá, Suzana Bandeira, Hilária Machado, Celsia Africano, Ivania Castro, Miguel Xavier, Elizeth Gonçalves. The former director of the Instituto, Abias Huongo, during his time leading the institute also provided outstanding support for our project. The authors also thank to all of the Angolan wildlife rangers and park officers (Miguel Savituma, António “Muloge” Lopes, Roland Goetz, among others) for their help and support during our field surveys and for their outstanding work on the preservation of the magnificent biodiversity of Angola. Without INBAC and the dedication of its staff to the study and protection of Angolan biodiversity none of our work would have been possible.

Finally, the authors thank to their respective families and friends for their support during the preparation of this Atlas.

Funding for this work came from the California Academy of Sciences, Villanova University through the Gerald M. Lemole Endowed Chair Fund, the JRS Biodiversity Foundation, and the United States National Science Foundation (NSF DEB-1019443, 1202609, 1560667, 1556255, 1556559, and 1556585) through grants to Aaron M. Bauer, David C. Blackburn and Matthew P. Heinicke. Mariana P. Marques is currently supported by FCT contract SFRH/BD/129924/2017.

LITERATURE CITED

- ADALSTEINSSON, S., W.R. BRANCH, S. TRAPE, L.J. VITT, AND S.B. HEDGES. 2009. Molecular phylogeny, classification, and biogeography of snakes of the Family Leptotyphlopidae (Reptilia, Squamata). *Zootaxa* 2244:1–50.
- ADLER, K. 1989. Herpetologists of the past, part 1. Pages 5–141 in K. ADLER, ed., *Contributions to the History of Herpetology*. Society for the Study of Amphibians and Reptiles, Oxford, Ohio, USA. 202 pp.
- ADLER, K. 2012. Herpetologists of the past, part 3. Pages 9–386 in K. ADLER, ed., *Contributions to the History of Herpetology*. Volume 3. Society for the Study of Amphibians and Reptiles, Vancouver, Canada. 564 pp.
- ADOLPHS, K. 2006. *Bibliotheca Cordyliiformium*. Squamata Verlag, Saint Augustin, Germany. 304 pp.
- ADOLPHS, K., AND M.F. BATES. 2010. *Gerrhosaurus skoogi*. The IUCN Red List of Threatened Species 2010: e.T178229A7502617. <<http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T178229A7502617.en>>. Downloaded on 30 January 2017.
- AGARWAL, I., L.M.P. CERÍACO, A.M. BAUER, AND S.A. BANDEIRA. 2017. *Kolekanos plumicaudus* (Slender Feather-tailed Gecko) Habitat use. *Herpetological Review* 48:649–650.
- AHL, E. “1923” 1925. Ueber neue afrikanische Frösche der Familie Ranidae. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1923:96–106.
- AHL, E. 1931a. Zur Systematik der afrikanischen Arten der Baumfroschgattung *Hyperolius* (Amphibia, Anura). *Mitteilungen aus dem Zoologischen Museum in Berlin* 17:1–132.
- AHL, E. 1931b. Amphibia, Anura III, Polypedatidae. *Das Tierreich* 55. 477 pp.
- AKANI, G.C., L. LUISELLI, Z. TOOZE, F.M., ANGELICI, C. CORTI, AND M.A.L. ZUFFI. 2001. The ecological distribution of *Causus* Wagler 1830 (Viperidae) in Nigeria, with special reference to *C. resimus* (Peters 1862) and *C. lichtensteini* (Jan 1859), two species rarely recorded from this country. *Tropical Zoology* 14(1):185–195.
- ALLEN, K. 2015. Phylogenetics and Phylogeography of Central and West African *Trachylepis* Skinks. Unpublished M.S. thesis, Villanova University, Villanova, Pennsylvania, USA. x + 90 pp.
- AMIET, J.-L. 2005. Les *Hyperolius* camerounais du groupe d’*H. nasutus* (Amphibia, Anura, Hyperoliidae). *Revue Suisse de Zoologie* 112:271–310.
- AMIET, J.-L. 2012. *Les Rainettes du Cameroun (Amphibiens Anoures)*. Jean-Louis Amiet & la Nef des livres, Saint-Nazaire, France. 591 pp.
- AMIET, J.-L., AND M. BURGER. 2004. *Trichobatrachus robustus*. The IUCN Red List of Threatened Species 2004: e.T54443A11146278. <<http://dx.doi.org/10.2305/IUCN.UK.2004.RLTS.T54443A11146278.en>>. Downloaded 20 April 2018.
- AMIET, J.-L., M.J. LARGEN, AND M. BURGER. 2013. *Hylarana lepus*. The IUCN Red List of Threatened Species 2013: e.T58198A18406665. <<http://dx.doi.org/10.2305/IUCN.UK.20132.RLTS.T58198A18406665.en>>. Downloaded on 14 October 2016.
- ANDERSSON, L.G. 1899. Catalogue of Linnean type-specimens of snakes in the Royal Museum in Stockholm. *Bihang till Kongl. Svenska Vetenskaps-Akademiens Handlingar*, 24(1V):6:1–35.
- ANDERSSON, L.G. 1901. Some new species of snakes from Cameroon and South America, belonging to the collections of the Royal Museum in Stockholm. *Bihang till Kongl. Svenska Vetenskaps-Akademiens Handlingar* 4:1–26.
- ANDERSSON, L.G. 1903. Neue Batrachier aus Kamerun, von den Herren Dr. Y. Sjöstedt und Dr. R. Jungner

- gesammelt. *Verhandlungen des Zoologisch-Botanischen Vereins in Wien*, 53:141–145.
- ANDERSSON, L.G. 1908. A remarkable new gecko from South-Africa and a new *Stenocercus* species from South-America in the Natural History Museum in Wiesbaden. *Jahrbüchern des Nassauischen Vereins für Naturkunde in Wiesbaden* 61:299–306, pl. 3.
- ANDERSSON, L.G. 1916. Notes on the reptiles and batrachians in the Zoological Museum at Gothenburg with an account of some new species. *Meddelanden från Götesborgs Musei Zoolgiska* 9:1–41.
- ANGEL, M.F. 1920. Liste de reptiles du Haut-Zambèze et de l'Afrique australe. Description d'une espèce nouvelle du genre *Monopeltis*. *Bulletin du Muséum National d'Histoire Naturelle, Paris* 26(7):614–617.
- ANGEL, M.F. 1921. Description d'un ophidien nouveau de l'Angola appartenant au genre *Psammodromus*. *Bulletin de la Société Zoologique de France* 46:116–118.
- ANGEL, M.F. 1922. Sur un lézard d'un genre nouveau de la famille de Gerrhosauridae. *Bulletin du Muséum National d'Histoire Naturelle, Paris* 28:150–152.
- ANGEL, M.F. 1923. *Reptiles*. Pages 157–169, 1 pl in ROHAN-CHABOT, ed., *Mission Rohan-Chabot, Angola et Rhodesia (1912–1914)*, Tome IV, *Histoire Naturelle*, Fascicule 1 (*Mammifères — Oiseaux — Reptiles — Poissons*). Imprimerie Nationale, Paris. 176 pp., 18 pls., 1 folding map.
- ANGEL, M.F. 1924. Note préliminaire sur deux batraciens nouveaux, des genres *Rappia* et *Bufo*, provenant d'Afrique orientale anglaise (Mission Alluaud et Jeannel, 1911–1912). *Bulletin du Muséum National d'Histoire Naturelle, Paris*, 30:269–270.
- ANGEL, M.F. 1934. Remarques sur le genre *Oophiosoma* Parker (Colubridé aglyphe) et description d'une espèce nouvelle. *Bulletin de la Société Zoologique de France*, 59:417–419.
- ANONYMOUS. 1752. *Catalogus van de Uitmuntende Cabinetten met allerley Soorten van Ongemeene Schoone Gepolyste Hoorns, Dubletschelpen, Coraal-en Zeegewassen; Beneveus het zeldzame en Vermaarde Cabinet van Gediertens in Flessen en Naturalia, en veele Raare Anatomische Preparata van den Professor Ruysch: als mede een Verzameling van Diverse Mineralen Versteende Zaaken, Agaate Boomstee- nen, Edele Gesteentens, en Verscheide andere Rariteiten. Met veel Moeiteen Kosten in een Reekd van Jaaren Vergadert. En nagelaten door wijlen der Heere Albertus Seba, Lid van de Keizerlijke Leopoldische Carolinische en Koninkl. Englische Societiet der Wetenschappen, als ook der Academie van Bolo- nien*. Th. Sluzyer, J. Schut en N. Blinkvliet, Amsterdam, The Netherlands. 1–51, 1–38, 1–18, 1–22 pp.
- ARNOLD, E.N. 1989. Towards a phylogeny and biogeography of the Lacertidae: relationships within an Old-World family of lizards derived from morphology. *Bulletin of the British Museum (Natural History), Zoology*, 55(2):209–257.
- ARNOLD, E.N. 1991. Relationships of the South African lizards assigned to *Aporosaurus*, *Meroles* and *Pediop- planis* (Reptilia: Lacertidae). *Journal of Natural History*, 25:783–807.
- AUERBACH, R.D. 1987. *The Amphibians and Reptiles of Botswana*. Okwepa Consultants, Gaborone. 295 pp., 19 pls.
- BAPTISTA, S.L., P. VAZ PINTO, M.D.C. FREITAS, C. CRUZ, AND J.M. PALMEIRIM. 2013. Geophagy by African ungulates: the case of the critically endangered giant sable antelope of Angola (*Hippotragus niger vari- ani*). *African Journal of Ecology*, 51:139–146.
- BARBOUR, T. 1911. Some West African amphibians. *Bulletin of the Museum of Comparative Zoology*, 54: 129–236.
- BARBOUR, T., AND A. LOVERIDGE. 1929. Typical reptiles and amphibians in the Museum of Comparative Zool- ogy. *Bulletin of the Museum of Comparative Zoology*, 96:59–211.
- BARBOUR, T., AND A. LOVERIDGE. 1946. First Supplement to typical reptiles and amphibians. *Bulletin of the Museum of Comparative Zoology*, 96(2):59–214.
- BARLOW, A., K. BAKER, C.R. HENDRY, L. PEPPIN, T. PHELPS, K.A. TOLLEY, C.E. WÜSTER, AND W. WÜSTER. 2013. Phylogeography of the widespread African puff adder (*Bitis arietans*) reveals multiple Pleistocene refugia in southern Africa. *Molecular Ecology*, 22:1134–1157.
- BATES, M.F. 2010. *Namibiana rostrata*. The IUCN Red List of Threatened Species 2010: e.T178247A7506323. <<http://dx.doi.org/10.2305/IUCN.UK.20104.RLTS.T178247A7506323.en>>. Down loaded on 30 January 2017.
- BATES, M.F., K.A. TOLLEY, S. EDWARDS, Z. DAVIDS, J.M. DA SILVA, AND W.R. BRANCH. 2013. A molecular phy- logeny of the African plated lizards, Genus *Gerrhosaurus* Wiegmann, 1828 (Squamata: Gerrhosauridae),

- with the description of two new genera. *Zootaxa*, 3750(5):465–493.
- BATES, M.F., W.R. BRANCH, A.M. BAUER, M. BURGER, J. MARAIS, G.J. ALEXANDER, AND M.S. DE VILLIERS. 2014. *Atlas and Red List of the Reptiles of South Africa, Lesotho and Swaziland*. *Suricata* 1. South African National Biodiversity Institute, Pretoria, South Africa. xvii + 485 pp.
- BAUER, A.M. 1990. Phylogeny and biogeography of the geckos of southern Africa and the islands of the western Indian Ocean: a preliminary analysis. Pp. 275–284 in G. Peters, and R. Hutterer, eds., *Vertebrates in the Tropics*. Zoologisches Forschungsinstitut und Museum A. Koenig, Bonn, Germany. 424 pp.
- BAUER, A.M. 1999. Evolutionary scenarios in the *Pachydactylus* group geckos of southern Africa: new hypotheses. *African Journal of Herpetology*, 48:53–62.
- BAUER, A.M. 2000. Comments on the types and type localities of South African reptiles collected by Heinrich Bergius and Ludwig Krebs. *African Journal of Herpetology*, 49:53–60.
- BAUER, A.M. 2002. Albertus Seba, Cabinet of Natural Curiosities. The Complete Plates in Colour, 1734–1765 [review and historical overview]. *Bulletin of the International Society for the History and Bibliography of Herpetology*, 3(2):8–15.
- BAUER, A.M. 2003. On the identity of *Lacerta punctata* Linnaeus, 1758, the type species of the genus *Euprepis* Wagler, 1830, and the generic assignment of Afro-Malagasy skinks. *African Journal of Herpetology*, 52:1–7.
- BAUER, A.M. 2010. A new species of *Pachydactylus* (Squamata: Gekkonidae) from the Otavi Highlands of northern Namibia. *Bonn Zoological Bulletin*, 57(2):257–266.
- BAUER, A.M., AND W.R. BRANCH. 1995. Geographic variation in western population of the *Pachydactylus punctatus* complex (Reptilia Gekkonidae). *Tropical Zoology*, 8(1):69–84.
- BAUER, A.M., AND D.A. GOOD. 1996. Phylogenetic systematics of the day geckos, genus *Rhoptropus* (Reptilia: Gekkonidae), of south-western Africa. *Journal of Zoology, London*, 238:635–663.
- BAUER, A.M., AND R. GÜNTHER. 1991. An annotated type catalogue of the geckos (Reptilia: Gekkonidae) in the Zoological Museum, Berlin. *Mitteilungen aus dem Zoologischen Museum in Berlin*, 67:279–310.
- BAUER, A.M., AND R. GÜNTHER. 1995. An annotated type catalogue of the lacertid lizards in the Zoological Museum, Berlin (Reptilia: Squamata: Lacertidae). *Mitteilungen aus dem Zoologischen Museum in Berlin*, 71:37–62.
- BAUER, A.M., AND T. LAMB. 2002. Phylogenetic relationships among members of the *Pachydactylus capensis* group of southern African geckos. *African Zoology*, 37:209–220.
- BAUER, A.M., AND T. LAMB. 2005. Phylogenetic relationships of southern African geckos in the *Pachydactylus* group (Squamata: Gekkonidae). *Africa Journal of Herpetology*, 54(2):105–129.
- BAUER, A.M., W. BÖHME, AND R. GÜNTHER. 2006. Annotated catalogue of the type of chameleons (Reptilia: Squamata: Chamaeleonidae) in the collection of the Museum für Naturkunde der Humboldt-Universität zu Berlin (ZMB). *Mitteilungen aus dem Zoologischen Museum in Berlin*, 82:268–281.
- BAUER, A.M. W.R. BRANCH, AND W.D. HAACKE. 1993. The herpetofauna of the Kamanjab area and adjacent Damaraland, Namibia. *Madoqua*, 18(2):117–145.
- BAUER, A.M., D.A. GOOD, AND W.R. BRANCH. 1997. The taxonomy of the Southern African leaf-toed geckos (Squamata: Gekkonidae), with a review of Old World “*Phyllodactylus*” and the description of five new genera. *Proceeding of the California Academy of Sciences*, Series 4, 49(14):447–497.
- BAUER, A.M., R. GÜNTHER, AND M. KLIPFEL. 1995. *Synopsis of taxa*. Pages 39–81 in A.M., Bauer, R. Günther, and M. Klipfel, eds., *Herpetological Contributions of W.C.H. Peters (1815–1883)*. Society for the Study of Amphibians and Reptiles, Oxford, Ohio, USA. 714 pp.
- BAUER, A.M., R. GÜNTHER, AND H.E. ROBECK. 1996. An annotated type catalogue of the hemisotid, microhylid, myobatrachid, pelobatid and pipid frogs in the Zoological Museum, Berlin (Amphibia: Anura: Hemisotidae, Microhylidae, Myobatrachidae, Pelobatidae and Pipidae). *Mitteilungen aus dem Zoologischen Museum in Berlin*, 72:259–275.
- BAUER, A.M., T. LAMB, W.R. BRANCH, AND R.D. BABB. 2001. New records of two rare snakes from northern Namibia, with comments on the trans-Kunene distribution of mopaneveld squamates (Squamata: Serpentes: Colubridae). *Herpetozoa*, 14(1/2):75–79.
- BAUER, A.M., T. LAMB, AND W.R. BRANCH. 2002. A revision of *Pachydactylus scutatus* (Reptilia: Squamata: Gekkonidae) with the description of a new species from northern Namibia. *Proceedings of the Califor-*

- nia Academy of Sciences, Series 4, 53(3):23–36
- BAUER, A.M., T. LAMB, AND W.R. BRANCH. 2006. A revision of the *Pachydactylus serval* and *P. weberi* groups (Reptilia: Gekkota: Gekkonidae) of southern Africa, with the description of eight new species. *Proceedings of the California Academy of Sciences*, Series 4, 57:595–709.
- BAUER, A.M., G. SHEA, AND R. GÜNTHER. 2003. An annotated catalogue of the types of scincid lizards (Reptilia, Squamata, Scincidae) in the collection of the Museum für Naturkunde der Humboldt-Universität zu Berlin (ZMB). *Mitteilungen aus dem Zoologischen Museum in Berlin*, 79:253–321.
- BAUER, A.M., S. TCHIBOZO, O.S.G. PAUWELS, AND G. LENGLET. 2006. A review of the gekkotan lizards of Bénin, with the description of a new species of *Hemidactylus* (Squamata: Gekkonidae). *Zootaxa*, 1242:1–20.
- BAUER, A.M., V. WALLACH, AND R. GÜNTHER. 2002. An annotated type catalogue of the scolecophidian, alethinophidian and macrostomatan snakes in the collection of the Museum für Naturkunde der Humboldt-Universität zu Berlin. *Mitteilungen aus dem Zoologischen Museum in Berlin*, 78:157–176.
- BAYLESS, M.K. 2002. Monitor lizards: a pan-African check-list of their zoogeography (Sauria: Varanidae: *Polydaedalus*). *Journal of Biogeography*, 29:1643–1701.
- BAYNHAM, T. 2010. Geographic distribution: Reptilia: Squamata: Elapidae: *Dendroaspis polylepis polylepis*. *African Herp News*, 51:25–27.
- BEDRIAGA, J. 1892. Note sur les amphibiens et reptiles recueillis par M. Adolphe F. Moller aux îles de la Guinée. *O Instituto*, ser. 2, 39(7):498–507; 39(9):642–648; 39(10):736–742; 39(11):814–820; 39(12):901–907; 40(4):299–303, 40(10):432–440.
- BELL, T. 1828. Descriptions of three new species of land tortoises. *Zoological Journal, London*, 3:419–421.
- BELLOSA, H., L. DIRKSEN, AND M. AULIYA. 2007. *Faszination Riesenschlangen, Mythos, Fakten und Geschichte*. BLV Buchenverlag, München, Germany. 159 pp.
- BENYR, G. 1995. Systematik und Taxonomie der Geckos des *Pachydactylus bibronii-laevigatus* Komplexes (Reptilia: Squamata: Gekkonidae). Diplomarbeit, Universität Wien, Vienna, Austria. 99 + [148] pp., 5 folding maps.
- BERSACOLA, E., M.S. SVENSSON, S.K. BEARDER, MILLS, M., AND V. NIJMAN. 2014. Hunted in Angola: Surveying the bushmeat trade. *SWARA*, 38:31–36.
- BIANCONI, J.J. 1849. Specimina zoologica Mosambicana. Fasciculus I. *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna*, 1:171–186, pls. 6, 8.
- BIANCONI, J.J. 1850. *Specimina Zoologica Mosambicana quibus vel novae vel minus notae Animalium Species Illustrantur*. Typis Academiae Scientiarum, Bobobiae [Bologna], Italy. [2] + [iv] + 363 pp., 48 pls.
- BISCHOFF, W. 1991. Übersicht der Arten und Unterarten der Familie Lacertidae. 4. Gattungen *Latastia*, *Meroles*, *Mesalina*, *Nucras*, *Ophisops*, *Pedioplanis* und *Philochortus*. *Die Eidechse*, 2(4):17–25.
- BLACKBURN, D. 2008. Biogeography and evolution of body size and life history of African frogs: Phylogeny of squeakers (*Arthroleptis*) and long-fingered frogs (*Cardioglossa*) estimated from mitochondrial data. *Molecular Phylogenetics and Evolution*, 49:806–826.
- BLACKBURN, D.C., AND K. JACKSON. 2006. Geographic distribution: *Cryptothylax greshoffii*. *Herpetological Review*, 37:358.
- BLACKBURN, D.C., AND S. SCALI. 2014. An annotated catalog of the type specimens of amphibian in the collection of the Museo Civico di Stori Naturale, Milan, Italy. *Herpetological Monographs*, 28:24–45.
- BLACKBURN, D.C., L.N. GONWOU, R. ERNST, AND M.-O. RÖDEL. 2009. A new squeaker frog (Arthroleptidae: *Arthroleptis*) from the Cameroon Volcanic Line with redescriptions of *Arthroleptis adolfifriederici* Nieden, 1911 “1910” and *A. variabilis* Matschie, 1893. *Breviora*, 515:1–23.
- BLACKBURN, D.C., V. GVOŽDÍK, AND A.D. LEACHÉ. 2010. A new squeaker frog (Arthroleptidae: *Arthrolepis*) from the mountains of Cameroon and Nigeria. *Herpetologica*, 66:335–348.
- BLOMMERS-SCHLÖSSER, R.M.A., AND C.P. BLANC. 1991. Amphibiens (premiere partie). *Faune de Madagascar*, 75: 1–379, 12 pls.
- BOCAGE, J.V.B. 1864. Note sur un nouveau batracien du Portugal, *Chioglossa lusitanica*, et sur une grenouille nouvelle de l’Afrique occidentale. *Revue et Magasin de Zoologie Pure et Appliquée*, Série 2, 16: 248–253.
- BOCAGE, J.V.B. 1866a. Lista dos reptis das possessões portuguesas d’Africa occidental que existem no Museu

- de Lisboa. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 1:37–56.
- BOCAGE, J.V.B. 1866b. Reptiles nouveaux ou peu connus recueillis dans les possessions portugaises de l'Afrique occidentale, qui se trouvent au Muséum de Lisbonne. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 1:57–78.
- BOCAGE, J.V.B. 1867a. Batraciens nouveaux de l'Afrique occidentale (Loanda et Benguella). *Proceedings of the Zoological Society of London*, 1867:843–846.
- BOCAGE, J.V.B. 1867b. Segunda lista dos reptis das possessões portuguezas d'Africa occidental que existem no Museu de Lisboa. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 1:217–228.
- BOCAGE, J.V.B. 1867c. Descriptions of two new saurians from Mossamedes (West Africa). *The Annals and Magazine of Natural History*, Series 3, 20:225–228.
- BOCAGE, J.V.B. 1867d. Diagnose de quelques reptiles nouveaux de l'Afrique occidentale. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 1:229–232.
- BOCAGE, J.V.B. 1870. Description d'un "saurien" nouveau de l'Afrique occidentale. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 3:66–68, pl. 1.
- BOCAGE, J.V.B. 1872. Diagnoses de quelques espèces nouvelles de reptiles d'Afrique occidentale. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 4:72–82.
- BOCAGE, J.V.B. 1873a. Reptiles nouveaux de l'intérieur de Mossamedes. *Jornal de Sciencias, Mathematicas Physicas e Naturaes*, 4:247–253.
- BOCAGE, J.V.B. 1873b. Mélanges erpétologiques. II. Sur quelques reptiles et batraciens nouveaux, rares ou peu connus d'Afrique occidentale. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 4:209–227.
- BOCAGE, J.V.B. 1876. [Nota sobre o "Statement regarding dr. Welwitsch's Angola Reptiles" de A. Günther]. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 5:276–277.
- BOCAGE, J.V.B. 1879a. Reptiles et batraciens nouveaux d'Angola. *Jornal de Sciencias, Mathematicas, Physicas e Naturaes*, 7:97–99.
- BOCAGE, J.V.B. 1879b. Subsídios para a Fauna das possessões portuguezas d'Africa occidental - III. Sertão de Angola, do Bihé ao Cassengue. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 7:90–96.
- BOCAGE, J.V.B. 1879c. Subsídios para a Fauna das possessões portuguezas d'Africa occidental - II. Sertão de Angola, de Benguella ao Bihé. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 7:88–89.
- BOCAGE, J.V.B. 1882a. Reptiles rares ou nouveaux d'Angola. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 8:299–304.
- BOCAGE, J.V.B. 1882b. Notice sur les espèce du genre "*Philothamnus*" qui se trouvent au Muséum de Lisbonne. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 9:1–19.
- BOCAGE, J.V.B. 1886a. Typhlopiens nouveaux de la faune africaine. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 11:171–174.
- BOCAGE, J.V.B. 1886b. Reptis e amphibios de S. Thomé. *Jornal das Sciencias Mathematicas, Physicas e Naturaes*, 11:65–70.
- BOCAGE, J.V.B. 1886c. Reptiles et batraciens nouveaux de l'île de S. Thomé. *Jornal das Sciencias Mathematicas, Physicas e Naturaes*, 11: 71–75.
- BOCAGE, J.V.B. 1886d. Note additionelle sur les reptiles de S. Thomé. *Jornal das Sciencias Mathematicas, Physicas e Naturaes*, 11:103–104.
- BOCAGE, J.V.B. 1887a. Mélanges erpétologiques. I. Reptiles et batraciens du Congo. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 11:177–192.
- BOCAGE, J.V.B. 1887b. Mélanges erpétologiques. IV. Reptiles du dernier voyage de MM. Capello et Ivens à travers l'Afrique. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 11:201–208.
- BOCAGE, J.V.B. 1887c. Mélanges erpétologiques. V. Reptiles et batraciens de Quissange (Benguella) envoyés par M. J. Anchieta. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 11:208–211.
- BOCAGE, J.V.B. 1887d. Sur un *Python* nouveau d'Afrique. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 12:87–88.
- BOCAGE, J.V.B. 1888. Mélanges erpétologiques. VI. Espèces du genre *Dendraspis*. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 12:138–147.
- BOCAGE, J.V.B. 1889. Mélanges erpétologiques. II. Sur une vipère apparemment nouvelle d'Angola. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 1:127–128.

- BOCAGE, J.V.B. 1890. Sur une espèce nouvelle à ajouter à la faune erpétologique de St. Thomé et Rolas. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 2:61–62.
- BOCAGE, J.V.B. 1893. Diagnoses de quelques nouvelles espèces de reptiles et batraciens d'Angola. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 3:115–121.
- BOCAGE, J.V.B. 1895a. *Herpétologie d'Angola et du Congo*. Ministério da Marinha e das Colónias, Lisbonne, Portugal. 203 pp., 20 pls.
- BOCAGE, J.V.B. 1895b. Sur une espèce de crapaud à ajouter à la faune herpétologique d'Angola. *Jornal de Sciencias. Mathematicas, Physicas e Naturaes*, Segunda Série, 4:51–53.
- BOCAGE, J.V.B. 1896a. Mammíferos, aves e reptis da Hanha, no sertão de Benguella. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 4:105–114.
- BOCAGE, J.V.B. 1896b. Sur deux agames d'Angola à écaillure hétérogène. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 4:127–130.
- BOCAGE, J.V.B. 1897a. Mammíferos, reptis e batrachios d'Africa de que existem exemplares typicos no Museu de Lisboa. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 4:187–206.
- BOCAGE, J.V.B. 1897b. Mammíferos, aves e reptis da Hanha, no sertão de Benguella (segunda lista). *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 4:207–211.
- BOCAGE, J.V.B. 1905. Contribution à la faune des quatre îles du Golfe de Guinée (suite). *Jornal das Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 7:65–96.
- BOESEMANN, M. 1970. The vicissitudes and dispersal of Albertus Seba's zoological specimens. *Zoologische Mededelingen*, 44:177–206.
- BOETTGER, O. 1887. Zweiter Beitrag zur Herpetologie Südwest-und Südafrikas. *Bericht der Senckenbergischen Naturforschenden Gesellschaft in Frankfurt-am-Main*, 1887:135–173, pl. 5.
- BOETTGER, O. 1888. Materialien zue Fauna des unteren Congo II. Reptilien und Batrachier. *Bericht der Senckenbergischen Naturforschenden Gesellschaft in Frankfurt-am-Main*, 1888:3–108, pls. 1–2.
- BOETTGER, O. 1893. *Katalog der Reptilien-Sammlung im Museum der Senckenbergischen Naturforschenden Gesellschaft in Frankfurt am Main. I. Teil (Rhynchocephalen, Schildkröten, Krokodile, Eidechsen, Chamäleons)*. Gebrüder Knauer, Frankfurt am Main, Germany. 140 pp.
- BOETTGER, O. 1895. Zwei neue Reptilien vom Zambesi. *Zoologischer Anzeiger*, 18:62–63.
- BOETTGER, O. 1898. *Katalog der Reptilien-Sammlung im Museum der Senckenbergischen Naturforschenden Gesellschaft in Frankfurt am Main. II. Teil (Schlangen)*. Gebrüder Knauer, Frankfurt am Main, Germany. 160 pp.
- BOGERT, C.M. 1940. Herpetological results of the Vernay Angola Expedition, with notes on African reptiles in other collections. Part I.—Snakes, including an arrangement of African Colubridae. *Bulletin of the American Museum of Natural History*, 77(1):1–107, pl. 1.
- BOGERT, C.M. 1942. *Pseudohaje* Günther, a valid genus for two West African arboreal cobras. *American Museum Novitates*, 1174:1–9.
- BÖHME, W. 1975. Zur Herpetofaunistik Kameruns, mit Beschreibung eines neuen Scinciden. *Bonner Zoologische Beiträge*, 26:2–48.
- BÖHME, W. 2014. Herpetology in Bonn. *Mertensiella*, 21:1–256.
- BÖHME, W., AND T. ZIEGLER. 1997. A taxonomic review of the *Varanus* (*Polydaedalus*) *niloticus* (Linnaeus, 1766) species complex. *The Herpetological Journal*, 7:155–162.
- BÖHME, W., M.-O., RÖDEL, C. BREDE, AND P. WAGNER. 2011. The reptiles (Testudines, Squamata, Crocodylia) of the forested southeast of the Republic of Guinea (Guinée forestière) with a country-wide checklist. *Bonn Zoological Bulletin*, 60(1):35–61.
- BOIE, F. 1827. Bemerkungen über Merrem's Versuch eines Systems der Amphibien. Marburg. 1820. 1. Lieferung. Ophidier. *Isis von Oken*, 20:columns 508–566.
- BONNATERRE, P.J. 1789. Tableau Encyclopédique et Méthodique des Trois Règnes de la Nature. Erpétologie. Panckoucke, Paris, France. xxviii + 73 pp., 42 pl.
- BOULENGER, G.A. 1882. *Catalogue of the Batrachia Salientia, s. Ecaudata, in the Collection of the British Museum*. Trustees of the British Museum, London, United Kingdom. xvi + 503 pp., pls. 1–30.
- BOULENGER, G.A. 1885. *Catalogue of the Lizards in the British Museum (Natural History)*. Volume 1. *Geckonidae, Eublepharidae, Uroplatidae, Pygopodidae, Agamidae*. Trustees of the British Museum,

- London, United Kingdom. xii + 436 pp., pls. 1–32.
- BOULENGER, G.A. 1887. *Catalogue of the Lizards in the British Museum (Natural History)*. Volume 3. *Lacertidae, Gerrhosauridae, Scincidae, Anelytropidae, Dibamidae, Chamaeleontidae*. Trustees of the British Museum, London, United Kingdom. xii + 575 pp., pls. 1–40.
- BOULENGER, G.A. 1888. On new or little known South African reptiles. *Annals and Magazine of Natural History*, Series 6, 2:136–141.
- BOULENGER, G.A. 1893. *Catalogue of the Snakes in the British Museum (Natural History)*. Volume 1. *Containing the Families Typhlopidae, Glauconidae, Boidae, Ilysiidae, Uropeltidae, Xenopeltidae, and Colubridae Aglyphae, part*. Trustees of the British Museum, London, United Kingdom. xiii + 448 pp., pls. 1–28.
- BOULENGER, G.A. 1894. *Catalogue of the Snakes in the British Museum (Natural History)*. Volume 2. *Containing the Conclusion of the Colubridae Aglyphae, part*. Trustees of the British Museum, London, United Kingdom. xi + 382 pp., pls. 1–20.
- BOULENGER, G.A. 1895a. An account of the reptiles and batrachians collected by Dr. A. Donaldson Smith in western Somali-land and the Galla country. *Proceedings of the Zoological Society of London*, 1894:530–540, pls. 29–30.
- BOULENGER, G.A. 1895b. Second report on additions to the lizard collection in the Natural History Museum. *Proceedings of the Zoological Society of London*, 1894:722–736, pls. 47–49.
- BOULENGER, G.A. 1895c. Descriptions of two new snakes from Usambara, German East Africa. *Annals and Magazine of Natural History*, Series 6, 16:171–173.
- BOULENGER, G.A. 1895d. On some new or little-known reptiles obtained by W. H. Crosse Esq. on the Niger. *Annals and Magazine of Natural History*, Series 6, 16:32–34.
- BOULENGER, G.A. 1896. *Catalogue of the Snakes in the British Museum (Natural History)*. Volume 3. *Containing the Families Colubridae (Opisthoglyphae and Proteroglyphae), Amblycephalidae, and Viperidae*. Trustees of the British Museum, London, United Kingdom. xiv + 727 pp., pls. 1–25.
- BOULENGER, G.A. 1897. A list of reptiles and batrachians from the Congo Free State, with descriptions of two new snakes. *Annals and Magazine of Natural History*, Series 6, 19:276–281.
- BOULENGER, G.A. 1900. A list of the batrachians and reptiles of the Gaboon (French Congo), with descriptions of new genera and species. *Proceedings of the Zoological Society of London*, 1900:433–456, pls. 27–32.
- BOULENGER, G.A. 1901. Matériaux pour la faune du Congo. Batraciens et reptiles nouveaux. *Annales du Musée Royal du Congo Belge, Zoologie, série I*, 2:1–14, pls. 1–5.
- BOULENGER, G.A. 1902. A list of the fishes, batrachians, and reptiles collected by Mr. J. ffolliot Darling in Mashonaland, with descriptions of new species. *Proceedings of the Zoological Society of London*, 1902:13–18, pls. 2–4.
- BOULENGER, G.A. 1904. Reptilia and Batrachia (1903). *Zoological Record*, 40:1–38.
- BOULENGER, G.A. 1905. A list of the batrachians and reptiles collected by Dr. W. J. Ansorge in Angola, with descriptions of new species. *Annals and Magazine of Natural History*, Series 7, 16:105–115, pl. 4.
- BOULENGER, G.A. 1907a. Descriptions of three new lizards and a frog, discovered by Dr. W. J. Ansorge in Angola. *Annals and Magazine of Natural History*, Series 7, 19:212–214.
- BOULENGER, G.A. 1907b. Descriptions of a new frog discovered by Dr. W. J. Ansorge in Mossamedes, Angola. *Annals and Magazine of Natural History*, Series 7, 20:109.
- BOULENGER, G.A. 1908. Description of three new snakes from Africa. *Annals and Magazine of Natural History*, Series 8, 2:93–94.
- BOULENGER, G.A. 1910. A revised list of the South African reptiles and batrachians, with synoptic tables, special reference of the specimens in the South African Museum, and descriptions of new species. *Annals of the South African Museum*, 5:455–538.
- BOULENGER, G.A. 1915. A list of the snakes of the Belgian and Portuguese Congo, Northern Rhodesia, and Angola. *Proceedings of the Zoological Society of London*, 1915:193–223.
- BOULENGER, G.A. 1917. A revision of the lizards of the genus *Nucras*, Gray. *Annals of the South African Museum*, 13:195–216, pls. 6–7.
- BOULENGER, G.A. 1919a. On *Rana ornatissima*, Bocage, and *R. ruddi*, Blgr. *Transactions of the Royal Society of South Africa*, 8:33–37.
- BOULENGER, G.A. 1919b. Descriptions d'un ophidien et d'un batracien nouveaux du Congo. *Revue Zoolo-*

- gique Africaine*, 7:186–187.
- BOULENGER, G.A. 1920. *Monograph of the Lacertidae*. Volume 1. Trustees of the British Museum (Natural History), London, United Kingdom. x + 352 pp.
- BOULENGER, G.A. 1921. *Monograph of the Lacertidae*. Volume 2. Trustees of the British Museum (Natural History), London, United Kingdom. viii + 451 pp.
- BOULENGER, G.A., AND J.H. POWER. 1921. A revision of the South African agamas allied to *Agama hispida* and *A. atra*. *Transactions of the Royal Society of South Africa*, 9(3):229–287.
- BOUNDY, J. 2014. Comments on some African taxa of leptotyphlopoid snakes. *Occasional Papers of the Museum of Natural Science, Louisiana State University*, 84:1–7.
- BOUR, R. 1978 “1979.” Les tortues actuelles de Madagascar (République Malagache): liste systématique et description de deux sous-espèces nouvelles (Reptilia-Testudines). *Bulletin de la Société Étude des Sciences Anjou, N.S.*, 10:141–154.
- BOUR, R. 1982. *Pelomedusa subrufa* (Lacépède, 1788), *Pelusios subniger* (Lacépède, 1788) (Reptilia, Chelonii) et le séjour de Philibert Commerson à Madagascar. *Bulletin du Muséum National d'Histoire Naturelle*, 4^e série, Section A. *Zoologie*, 4:531–539.
- BOUR, R. 2006. Le genre *Kinixys* Bell: histoire nomenclaturale et taxinomique. *Chéloniens*, 3:8–15.
- BOUR, R. 2008. Neotype of *Emys castanea* Schweigger, 1812 (Pelomedusidae). *Emys*, 15(4):36–40.
- BOUR, R., A. DUBOIS, AND R.G. WEBB. 1995. Types of recent trionychid turtles in the Muséum national d'Histoire naturelle, Paris. *Dumerilia*, 2:73–92.
- BOUR, R., L. LUISELLI, F. PETROZZI, G.H. SEGNIAGBETO, AND L. CHIRIO. 2016. *Pelusios castaneus* (Schweigger 1812) – West African Mud Turtle, Swamp Terrapin. Pages 095.1–11 in A.G.J. Rhodin, P.C.H. Pritchard, P.P. van Dijk, R.A. Saumure, K.A. Buhlmann, J.B. Iverson, and R.A. Mittermeier, eds., *Conservation Biology of Freshwater Turtles and Tortoises. Chelonian Research Monograph 5*.
- BOYCOTT, R.C., AND O. BOURQUIN. 2008. *Pelomedus subrufa* (Lacépède 1788) – helmeted turtle, helmeted terrapin. Pages 007.1–007.6 in A.G.J. Rhodin, P.C.H. Pritchard, P.P. van Dijk, R.A. Saumure, K.A. Buhlmann, and J.B. Iverson, eds., *Conservation Biology of Freshwater Turtles and Tortoises. Chelonian Research Monograph 5*.
- BRANCH, W.R. 1988. *Field Guide to Snakes and Other Reptiles of Southern Africa*. Struik Publishers, Cape Town, South Africa. 328 pp.
- BRANCH, W.R. 1990. The genus *Tetradactylus* (Sauria: Gerrhosaurinae) in the Cape Province, South Africa: New records and their taxonomic status. *Journal of the Herpetological Association of Africa*, 37:13–16.
- BRANCH, W.R. 1998. *Field Guide to Snakes and Other Reptiles of Southern Africa*, 3rd edition. Struik Publishers, Cape Town, South Africa. 399 pp.
- BRANCH, W.R. 2008. *Tortoises, Terrapins & Turtles of Africa*. Struik Nature, Cape Town, South Africa. 128 pp.
- BRANCH, B. [W.R.]. 2018. Auf Reptiliensuch in der angolischen Okavango-Wildnis / Herping the Angolan Okavango wilderness. *Sauria*, 40:25–57.
- BRANCH, W.R., AND W. CONRADIE. 2015. IV. Herpetofauna da região da Lagoa Carumbo. Pages 194–209 in B. Huntley, and P. Francisco, eds., *Avaliação Rápida da Biodiversidade da Região da Lagoa Carumbo, Lunda Norte - Angola*. Ministério do Ambiente de Angola, Luanda, Angola. 219 pp.
- BRANCH, W.R., AND G.V. HAAGNER. 1993. The skink *Mabuya ivensii*: new records from Zambia and Zaire, and the status of the subspecies *septemlineata* Laurent 1964 and the genus *Labuya* Horton 1972. *Amphibia-Reptilia*, 14:105–115.
- BRANCH, W.R., AND C.J. MCCARTNEY. 1992. A report on a small collection of reptiles from southern Angola. *The Journal of the Herpetological Association of Africa*, 41(1):1–3.
- BRANCH, W.R., W. HAACKE, P. VAZ PINTO, W. CONRADIE, N. BAPTISTA, N., L. VERBURGT, AND L. VERISSIMO. 2017. Loveridge's Angolan geckos, *Afroedura karroica bogerti* and *Pachydactylus scutatus angolensis* (Sauria, Gekkonidae): new distribution records, comments on type localities and taxonomic status. *Zoosystematics and Evolution*, 93(1):157–166.
- BRANCH, W.R., M.-O. RÖDEL, AND J. MARAIS. 2005. A new species of rupicolous *Cordylus* Laurenti 1768 (Sauria: Cordylidae) from northern Mozambique. *African Journal of Herpetology*, 54(2):131–138.
- BRANCH, W.R., R. SHINE, R., P.S. HARLOW, AND J.K. WEBB. 1997. Sexual dimorphism, diet and aspects of

- reproduction of the western keeled snake, *Pythonodipsas carinata* (Serpentes: Colubridae). *African Journal of Herpetology*, 46(2): 89–97.
- BRANDSTÄTTER, F. 1996. *Die Sandernnattern Gattung Psammophis*. Westarp Wissenschaften, Magdeburg. 142 pp.
- BROADLEY, D.G. 1959. The herpetology of Southern Rhodesia, Part 1. Snakes. *Bulletin of the Museum of Comparative Zoology*, 120:1–100, pls. 1–6.
- BROADLEY, D.G. 1962a. On some reptile collections from the north-western and north-eastern districts of Southern Rhodesia 1958–61, with descriptions of four new lizards. *Occasional Papers of the National Museums of Southern Rhodesia*, Series B, *Natural Sciences*, 3(26):787–843.
- BROADLEY, D.G. 1962b. Serpentes, Colubridae: *Natriciteres olivaceus bipostocularis* n. subsp. *Occasional Papers of the National Museums of Southern Rhodesia*, Series B, *Natural Sciences*, 3(25):785–786.
- BROADLEY, D.G. 1963. *Psammophis sibilans* (Linnaeus, 1958) – A taxonomic dustbin. *Journal of the Herpetological Association of Rhodesia*, 20(1):5–7.
- BROADLEY, D.G. 1965a. The *Hyperolius marmoratus* superspecies – Distribution of the central and southern African forms. *Journal of the Herpetological Association of Africa*, 1(1):23–27.
- BROADLEY, D.G. 1965b. Some problems presented by the sand lizards of the *Nucras tessellata* group. *Journal of the Herpetological Association of Africa*, 1(1):18–23.
- BROADLEY, D.G. 1965c. The ecology of the skinks *Riopa* and *Eumecia*. *Journal of the Herpetological Association of Africa*, 1(1):16–17.
- BROADLEY, D.G. 1966a. A review of the *Riopa sundevalli* group (Sauria: Scincidae) in Southern Africa. *Arnoldia (Rhodesia)*, 2(34):1–8.
- BROADLEY, D.G. 1966b. A review of the African Stripe-Bellied Sand-Snakes of the genus *Natriciteres Psammophis*. *Arnoldia (Rhodesia)*, 2(36):1–12.
- BROADLEY, D.G. 1966c. Notes on the taxonomy and distribution of the African cobras of the genus *Naja*. *Journal of the Herpetological Association of Africa*, 2(1):21–30.
- BROADLEY, D.G. 1966d. A review of the genus *Natriciteres* Loveridge (Serpentes: Colubridae). *Arnoldia (Rhodesia)*, 2(35):1–11.
- BROADLEY, D.G. 1968a. A revision of the African genus *Typhlosaurus* Wiegmann (Sauria: Scincidae). *Arnoldia (Rhodesia)*, 3(36):1–20.
- BROADLEY, D.G. 1968b. The venomous snakes of Central and South Africa. Pages 403–435, in W. Bücherl, E.E. Buckley, and V. Deulofeu eds., *Venomous Animals and their Venoms. Volume 1. Venomous Vertebrates*. Academic Press, New York, New York, USA. xxiv + 707 pp.
- BROADLEY, D.G. 1968c. A review of the African cobras of the genus *Naja* (Serpentes: Elapinae). *Arnoldia (Rhodesia)*, 3(29):1–14.
- BROADLEY, D.G. 1968d. A new species of *Crotaphopeltis* (Serpentes: Colubridae) from Barotseland, Zambia. *Fieldiana, Zoology*, 51(10):135–139.
- BROADLEY, D.G. 1969. A revision of the genus *Acontias* Cuvier (Sauria: Scincidae). *Arnoldia (Rhodesia)*, 4(26):1–29.
- BROADLEY, D.G. 1971a. A reassessment of the northern forms currently assigned to the *Cordylus cordylus* group. *Journal of the Herpetological Association of Africa*, 7:20–22.
- BROADLEY, D.G. 1971b. The reptiles and amphibians of Zambia. *The Puku*, 6:1–143.
- BROADLEY, D.G. 1971c. A revision of the African snake genera *Amblyodipsas* and *Xenocalamus*. *Occasional Papers of the National Museums of Rhodesia*, Series B, *Natural Sciences*, 4(33):629–697.
- BROADLEY, D.G. 1971d. A review of *Rhamphiophis acutus* (Günther) with the description of a new subspecies from Zambia (Serpentes: Colubridae). *Arnoldia (Rhodesia)*, 5(8):1–8.
- BROADLEY, D.G. 1971e. A review of the African snake genus *Elapsoidea* Bocage (Elapidae). *Occasional Papers of the National Museums of Rhodesia*, Series B, *Natural Sciences*, 4(32):577–626.
- BROADLEY, D.G. 1972. A review of the *Nucras tessellata* group (Sauria: Lacertidae). *Arnoldia (Rhodesia)*, 5(20):1–35.
- BROADLEY, D.G. 1974. A review of the cobras of the *Naja nigricollis* complex in southwestern Africa. *Cimbebasia*, 2A:155–162.
- BROADLEY, D.G. 1975a. A review of the *Mabuya lacertiformis* complex in southern Africa (Sauria: Scincidae).

- Arnoldia (Rhodesia)*, 7(18):1–16.
- BROADLEY, D.G. 1975b. A review of *Psammophis leightoni* and *Psammophis notostictus* in southern Africa (Serpentes: Colubridae). *Arnoldia (Rhodesia)*, 7(13):1–17.
- BROADLEY, D.G. 1977a. A review of the *Mabuya striata* complex in south-east Africa (Sauria: Scincidae). *Occasional Papers of the National Museums of Rhodesia*, Series B, *Natural Sciences*, 6(2):45–79.
- BROADLEY, D.G. 1977b. A review of the genus *Psammophis* in southern Africa (Serpentes: Colubridae). *Arnoldia (Rhodesia)*, 8(12): 1–29.
- BROADLEY, D.G. 1977c. A revision of the African snakes of the genus *Psammophylax* Fitzinger (Colubridae). *Occasional Papers of the National Museums of Rhodesia*, Series B, *Natural Sciences*, 6(1):1–44.
- BROADLEY, D.G. 1979. Problems presented by geographical variation in the African vine snakes, genus *Thelotornis*. *South African Journal of Zoology*, 14(3):125–131.
- BROADLEY, D.G. 1980. A revision of the African snake genus *Prosymna* Gray (Colubridae). *Occasional Papers of the National Museums of Rhodesia*, Series B, *Natural Sciences*, 6(7):481–556.
- BROADLEY, D.G. 1981a. A review of the genus *Pelusios* Wagler in southern Africa (Pleurodira: Pelomedusidae). *Occasional Papers of the National Museums of Rhodesia*, Series B, *Natural Sciences*, 6(9): 633–686.
- BROADLEY, D.G. 1981b. A review of the population of *Kinixys* (Testudinidae) occurring in south-eastern Africa. *Annals of the Cape Provincial Museums (Natural History)*, 13(14):195–216.
- BROADLEY, D.G. 1983. Records of two species of *Grayia* (Serpentes: Colubridae) from Zambia. *Black Lechwe* (new series), 5:21–25.
- BROADLEY, D.G. 1984. A review of geographical variation in the African python, *Python sebae* (Gmelin). *British Journal of Herpetology*, 6:359–367.
- BROADLEY, D.G. 1989a. *Kinixys belliana*, Bell's Hinged Tortoise. Pages 49–55 in I.R. Swingland, and M.W. Klemens, eds., *The Conservation Biology of Tortoises*. *Occasional Papers of the IUCN Species Survival Commission (SSC)* 5:i–iv + 1–204.
- BROADLEY, D.G. 1989b. *Geochelone pardalis*, Leopard Tortoise (English), Bergskilpad (Afrikaans). Pages 43–46 in I.R. Swingland, and M.W. Klemens, eds., *The Conservation Biology of Tortoises*. *Occasional Papers of the IUCN Species Survival Commission (SSC)* 5:i–iv + 1–204.
- BROADLEY, D.G. 1989c. A reappraisal of the genus *Panaspis* Cope, with the description of a new species of *Leptosiphos* (Reptilia: Scincidae) from Tanzania. *Arnoldia (Zimbabwe)*, 9(32): 439–449.
- BROADLEY, D.G. 1990. *FitzSimons' Snakes of Southern Africa*. Jonathan Ball and Ad. Donker Publishers, Parklands, South Africa. 387 pp.
- BROADLEY, D.G. 1991a. A review of the southern African stiletto snakes of the genus *Atractaspis* A. Smith (Serpentes: Atractaspididae). *Arnoldia (Zimbabwe)*, 9(36): 495–517.
- BROADLEY, D.G. 1991b. A review of the Namibian snakes of the genus *Lycophidion* (Serpentes: Colubridae), with the description of a new endemic species. *Annals of the Transvaal Museum*, 35(14):209–215.
- BROADLEY, D.G. 1991c. The herpetofauna of northern Mwimilunga District, Northwestern Zambia. *Arnoldia (Zimbabwe)*, 9(37):519–538.
- BROADLEY, D.G. 1992a. The savannah species *Kinixys* (Testudinidae). *Journal of the Herpetological Association of Africa*, 40:12–13.
- BROADLEY, D.G. 1992b. The taxonomy and zoogeography of the genus *Lycophidion* (Serpentes: Colubridae). *Journal of the Herpetological Association of Africa*, 40:30–36.
- BROADLEY, D.G. 1993. A review of the southern African species of *Kinixys* Bell (Reptilia: Testudinidae). *Annals of the Transvaal Museum*, 36(6):41–52.
- BROADLEY, D.G. 1994. A revision of the African genus *Scaphiophis* Peters (Serpentes: Colubridae). *The Herpetological Journal*, 4:1–10.
- BROADLEY, D.G. 1995. The Snouted Cobra, *Naja annulifera*, a valid species in southern Africa. *Journal of the Herpetological Association of Africa*, 44(2):26–32.
- BROADLEY, D.G. 1996a. A review of the tribe Atherini (Serpentes: Viperidae), with the descriptions of two new genera. *African Journal of Herpetology*, 45:40–48.
- BROADLEY, D.G. 1996b. A revision of the genus *Lycophidion* Fitzinger (Serpentes: Colubridae) in Africa south of the Equator. *Syntarsus*, 3:1–33.

- BROADLEY, D.G. 1997a. Amphibaenia. *Dalophia ellenbergeri* (Angel, 1920). *African Herp News*, 26:34–35.
- BROADLEY, D.G. 1997b. A review of the *Monopeltis capensis* complex in southern Africa (Reptilia: Amphisbaenidae). *African Journal of Herpetology*, 46(1):1–12.
- BROADLEY, D.G. 1997c. A review of *Hemirhagerrhis viperina* (Bocage) (Serpentes: Colubridae), a rupicolous psammophine snake. *Madoqua*, 19(2):161–169.
- BROADLEY, D.G. 1998a. A review of the genus *Atheris* Cope (Serpentes: Viperidae), with the description of a new species from Uganda. *Herpetological Journal*, 8:117–135.
- BROADLEY, D.G. 1998b. A review of the African *Elapsoidea semiannulata* complex (Serpentes: Elapsoidea). *African Journal of Herpetology*, 47(1):13–23.
- BROADLEY, D.G. 2000. A review of the genus *Mabuya* in southeastern Africa (Sauria: Scincidae). *African Journal of Herpetology*, 49(2):87–110.
- BROADLEY, D.G. 2001. A review of the genus *Thelotornis* A. Smith in eastern Africa, with the description of a new species from the Usambara Mountains (Serpentes: Colubridae: Disphidini). *African Journal of Herpetology*, 50(2):53–70.
- BROADLEY, D.G. 2002. A review of the species of *Psammophis* Boie found south of Latitude 12° S (Serpentes: Psammophiinae). *African Journal of Herpetology*, 51(2):83–119.
- BROADLEY, D.G. 2004. Chapter 8: Herpetofauna of the Four Corners Area. Pages 313–350 in J.R. Timberlake, and S.L. Childs, eds., *Biodiversity of the Four Corners Area: Technical Reviews Volume 2* (Chapters 5–15). *Occasional Publications in Biodiversity* No. 15, Biodiversity Foundation for Africa, Bulawayo/Zambezi Society, Harare, Zimbabwe. 203 pp.
- BROADLEY, D.G. 2005. Conservation of names in the *Mehelya capensis* complex (Serpentes: Lamprophiinae). *Arnoldia (Zimbabwe)*, 10:231–233.
- BROADLEY, D.G. 2006. A new species of *Typhlacontias* (Reptilia: Scincidae: Feylininae) from western Tanzania. *Proceedings of the California Academy of Sciences*, Series 4, 57(20):557–560.
- BROADLEY, D.G. 2007. Book review: *Bibliotheca Cordyliformium. Neues Quellenverzeichnis der Gürtelschweife und Schildchsen* (Reptilia, Cordylidae & Gerrhosauridae) by Klaus Adolphs. *African Journal of Herpetology*, 56(1):99–100.
- BROADLEY, D.G. 2014. A new species of *Causus* Lichtenstein from the Congo/Zambezi Watershed in North-Western Zambia (Reptilia: Squamata: Viperidae). *Arnoldia (Zimbabwe)*, 10(29):341–350.
- BROADLEY, D.G., AND A.S. BALDWIN. 2006. Taxonomy, natural history, and zoogeography of the southern African shield cobras, genus *Aspidelaps* (Serpentes: Elapidae). *Herpetological Natural History*, 9(2):163–176.
- BROADLEY, D.G., AND A.M. BAUER. 1998. A review of the *Mabuya quinquetaeniata* complex in East Africa (Sauria: Scincidae). *African Journal of Herpetology*, 47(2):43–58.
- BROADLEY, D.G., AND R.C. BOYCOTT. 2008. *Pelusios rhodesianus* Hewitt, 1927 – Variable Mud Turtle, Variable Hinged Terrapin. Pages pp. 004.1–004.3 in A.G.J. Rhodin, P.C.H. Pritchard, P.P. van Dijk, R.A. Saumure, K.A. Buhlmann, and J.B. Iverson, eds., *Conservation Biology of Freshwater Turtles and Tortoises. Chelonian Research Monograph* 5.
- BROADLEY, D. G., AND W.R. BRANCH. 2002. A review of the small east African *Cordylus* (Sauria: Cordylidae), with the descriptin of a new species. *African Journal of Herpetology*, 51(1):9–34.
- BROADLEY, D.G., AND S. BROADLEY. 1997. A revision of the African genus *Zygaspis* Cope (Reptilia: Amphisbaenia). *Syntarsus*, 4:1–24.
- BROADLEY, D.G., AND S. BROADLEY. 1999. A review of the African worm snakes from south of latitude 12°S (Serpentes: Leptotyphlopidae). *Syntarsus*, 5:1–36.
- BROADLEY, D.G., AND F.P.D. COTTERILL. 2004. The reptiles of southeast Katanga, an overlooked “hot spot.” *African Journal of Herpetology*, 53(1):35–61.
- BROADLEY, D.G., AND C. GANS. 1969. A new species of *Zygaspis* (Amphisbaenia: Reptilia) from Zambia and Angola. *Arnoldia (Rhodesia)*, 25(4):1–4.
- BROADLEY, D.G., AND C. GANS. 1975. Geographical distribution – Additional records for *Zygaspis niger* and *Z. quadrifrons*. *Herpetological Review*, 26(1):21.
- BROADLEY, D.G., AND K.M. HOWELL. 1991. A check list of the reptiles of Tanzania, with synoptic keys. *Syntarsus*, 1:1–70.

- BROADLEY, D.G., AND B. HUGHES. 1993. A review of the genus *Lycophidion* (Serpentes: Colubridae) in north-eastern Africa. *Herpetological Journal*, 3:8–18.
- BROADLEY, D.G., AND B. HUGHES. 2000. A revision of the African genus *Hemirhagerhris* Boettger 1893 (Serpentes: Colubridae). *Syntarsus*, 6:1–17.
- BROADLEY, D.G., AND B. MARTIZ. 2010a. *Lygodactylus chobiensis*. The IUCN Red List of Threatened Species 2010: e.T174118A7018090. <<http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T174118A7018090.en>>. Downloaded on 24 January 2017.
- BROADLEY, D.G., AND B. MARITZ. 2010b. *Trachylepis lacertiformis*. The IUCN Red List of Threatened Species 2010: e.T174136A7021300. <<http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T174136A7021300.en>> Downloaded on 24 March 2017.
- BROADLEY, D.G., AND G.J. MEASEY. 2010. *Monopeltis anchietae*. The IUCN Red List of Threatened Species 2010: e.T176243A7203293. <<http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T176243A7203293.en>>. Downloaded on 06 March 2017.
- BROADLEY, D.G., AND B. SCHÄTTI. 1999. “1997.” A new species of *Coluber* from northern Namibia (Reptilia: Serpentes). *Madoqua*, 19(2):171–174.
- BROADLEY, D.G., AND V. WALLACH. 2002. Review of the Dispholidini, with the description of a new genus and species from Tanzania (Serpentes: Colubridae). *Bulletin of the Natural History Museum, London (Zoology series)*, 68(2):57–74.
- BROADLEY, D.G., AND V. WALLACH. 2007a. A review of East and Central African species of *Letheobia* Cope, revived from the synonymy of *Rhinotyphlops* Fitzinger, with the descriptions of five new species (Serpentes: Typhlopidae). *Zootaxa*, 1515:31–68.
- BROADLEY, D.G., AND V. WALLACH. 2007b. A revision of the genus *Leptotyphlops* in northeastern Africa and southwestern Arabia (Serpentes: Leptotyphlopidae). *Zootaxa* 1408:1–78.
- BROADLEY, D.G., AND V. WALLACH. 2009. A review of the eastern and southern African blind-snakes (Serpentes: Typhlopidae), excluding *Letheobia* Cope, with the description of two new genera and a new species. *Zootaxa*, 2255:1–100.
- BROADLEY, D.G., AND G. WATSON. 1976. A revision of the worm snakes of south-eastern Africa (Serpentes: Leptotyphlopidae). *Occasional Papers of National Museums and Monuments of Rhodesia*, Series B, 8:465–510.
- BROADLEY, D.G., AND W. WÜSTER. 2004. A review of the southern African “non-spitting” cobras (Serpentes: Elapidae: *Naja*). *African Journal of Herpetology*, 53(2):101–122.
- BROADLEY, D.G., C.T. DORIA, AND J. WIGGE. 2003. *Snakes of Zambia, an Atlas and Field Guide*. Edition Chimaira, Frankfurt am Main, Germany. 280 pp.
- BROADLEY, D.G., C. GANS, AND J. VISSER. 1976. Studies on amphisbaenians (Amphisbaenia, Reptilia) 6. The genera *Monopeltis* and *Dalophia* in southern Africa. *Bulletin of the American Museum of Natural History*, 157(5):311–486.
- BROADLEY, D.G., K.A. TOLLEY, W. CONRADIE, S. WISHART, J.-F. TRAPE, M. BURGER, C. KUSAMBA, A.-G. ZASSI-BOULOU, AND E. GREENBAUM. 2018. A phylogeny and genus-level revision of the African file snakes *Goniotophis* Boulenger (Squamata: Lamprophiidae). *African Journal of Herpetology* 67:43–60.
- BRYGOO, E.-R. 1983. Les types de Caméléonidés (Reptiles, Sauriens) du Muséum national d'Histoire naturelle, catalogue critique. *Bulletin du Muséum National d'Histoire Naturelle*, 4^e série, Section A. *Zoologie*, 5(3, supplement):1–26.
- BRYGOO, E.-R. 1985. Les types de Scincidés (Reptiles, Sauriens) du Muséum national d'Histoire naturelle, catalogue critique. *Bulletin du Muséum National d'Histoire Naturelle*, 4^e série, Section A. *Zoologie*, 7(3):1–126.
- BRYGOO, E.R. 1987. Les types de Varanidés (Reptiles, Sauriens) du Muséum national d'Histoire naturelle, catalogue critique. *Bulletin du Muséum National d'Histoire Naturelle*, 4^e série, Section A. *Zoologie*, 9(2):21–38.
- BRYGOO, E.-R., AND R. ROUX-ESTÈVE. 1981. Un genre de lézards scincinés d'Afrique: *Melanoseps*. *Bulletin du Muséum National d'Histoire Naturelle*, 4^e série, Section A. *Zoologie*, 3:1170–1191.
- BRYGOO, E.-R., AND R. ROUX-ESTÈVE. 1983. *Feylinia*, genre de lézards africains de la famille des Scincidae, sous-famille des Feyliniinae. *Bulletin du Muséum National d'Histoire Naturelle*, 4^e série, Section A.

Zoologie, 5(1):370–341.

- BUTCHART, S.H.M., AND J.P. BIRD. 2010. Data Deficient birds on the IUCN Red List: What don't we know and why does it matter? *Biological Conservation*, 143:239–247.
- BURGER, M. 2004. *Hemiscus perreti*. The IUCN Red List of Threatened Species 2004: e.T55284A11271691. <<http://dx.doi.org/10.2305/IUCN.UK.2004.RLTS.T55284A11271691.en>>. Downloaded on 13 October 2015.
- BURROWES, P.A., AND I. DE LA RIVA. 2017. Detection of the amphibian chytrid fungus *Batrachochytrium dendrobatidis* in museum specimens of Andean aquatic birds: Implications for pathogen dispersal. *Journal of Wildlife Diseases*, 53(2):349–355.
- CÁCERES, A., M. MELO, J. BARLOW, P. CARDOSO, F. MAIATO, AND M.S.L. MILLS. 2015. Threatened birds of the Angolan Central Escarpment: distribution and response to habitat change at Kumbira Forest. *Oryx*, 49(4):727–734.
- CAPOCACCIA, L. 1961. Contributo allo studio dei serpenti delle isole del Golfo di Guinea. *Museo Civico di Storia Naturale di Genova*, 72:285–309.
- CARDONEGA, A.O. 1940–1942. *História Geral das Guerras Angolanas*. 3 Volumes. Agência-Geral das Colónias, Lisboa, Portugal. xx + 629 pp., 2 pls; viii + 595 pp., 2 pls.; xi + 509 pp., 2 pls., 28 illuminated leaves, 2 foldouts.
- CARLETON, M.D., R.A. BANASIAK, AND W.T. STANLEY. 2015. A new species of the rodent genus *Hylomyscus* from Angola, with a distribution summary of the *H. ansellii* species group (Muridae: Murinae: Praomyini). *Zootaxa*, 4040(2):101–128.
- CARPENTER, A.I. 2011. *Chamaeleo namaquensis*. The IUCN Red List of Threatened Species 2011: e.T176311A7215782. <<http://dx.doi.org/10.2305/IUCN.UK.2011-1.RLTS.T176311A7215782.en>>. Downloaded on 1 December 2014.
- CARRANZA, S., AND E.N. ARNOLD. 2006. Systematics, biogeography, and evolution of *Hemidactylus* geckos (Reptilia: Gekkonidae) elucidated using mitochondrial DNA sequences. *Molecular Phylogenetics and Evolution*, 38(2006):531–545.
- CARVALHO, F.A. 1836. *Instruções sobre o Modo de Preparar, e Conservar Accidentalmente os Diferentes Exemplos Zoológicos, que Houverem de ser Conduzidos das Possessões Portuguezas Ultramarinas até á sua Definitiva Preparação*. Academia Real das Ciências de Lisboa, Lisboa, Portugal. 83 pp.
- CASTIGLIA R., M. CORTI, AND F. ANNESI. 2006. Molecular and karyological homogeneity in *Trachylepis striata* (Peters 1844) and *T. wahlbergii* (Peters 1869) (Scincidae Reptilia). *Tropical Zoology*, 19:119–128.
- CAVAZZI, G.A. 1687. *Istorica Descrizione de Tre Regni Congo, Matamba, et Angola, sitvati nell' Etiopia Inferiore Occidentale e delle Missioni Apostoliche Esercitateui da Religiosi Capuccini*. Giacomo Monti, Bologna, Italy. xiv + 933 + [1] pp.
- CEI, J.M. 1977. Chaves para uma identificação preliminar dos batráquios anuros da R. P. de Angola. *Boletim da Sociedade Portuguesa de Ciências Naturais*, 17:5–26.
- CERÍACO, L.M.P. in press. *De Domingos Vandelli a Barbosa du Bocage. História da Zoologia e Coleções de História Natural em Portugal, Brasil e África Portuguesa (Século XVIII-XX)*. Editora da Universidade de São Paulo, São Paulo, Brazil.
- CERÍACO, L.M.P., A.M. BAUER, D.C. BLACKBURN, AND A.C.F.C. LAVRES. 2014. The herpetofauna of the Capanda Dam region, Malanje, Angola. *Herpetological Review*, 45(4):667–674.
- CERÍACO, L.M.P., D.C. BLACKBURN, M.P. MARQUES, AND F.M. CALADO. 2014. Catalogue of the amphibian and reptile type specimens of the Museu de História Natural da Universidade do Porto in Portugal, with some comments on problematic taxa. *Alytes*, 31:13–36.
- CERÍACO, L.M.P., A.M. BAUER, M.P. HEINICKE, AND D.C. BLACKBURN. 2016. *Chondrodactylus pulitzeriae* (Schmidt, 1933), Pulitzer's thick-toed gecko in Angola. *African Herp News*, 64:41–44.
- CERÍACO, L.M.P., S.A.C. DE SÁ, S. BANDEIRA, H. VALÉRIO, E.L. STANLEY, A.L. KUHN, M.P. MARQUES, AND J.V. VINDUM. 2016. Herpetological survey of the Iona and Namibe National Park, Angola, and an Annotated Checklist of the Namibe Province herpetofauna. *Proceedings of the California Academy of Sciences*, Series 4, 63(2):15–61.
- CERÍACO, L. M. P., M.P. MARQUES, AND S. A. BANDEIRA. 2016. *Anfíbios e Répteis do Parque Nacional da Candonga*. Instituto Nacional da Biodiversidade e Áreas de Conservação, Angola & Museu Nacional de

- História Natural e da Ciência, Lisboa, Portugal. 97 pp.
- CERÍACO, L.M.P., M.P. MARQUES, AND A.M. BAUER. 2018. Miscellanea herpetologica Sanctithomae: Additions, corrections and comments on some reptile taxa from the Island of São Tomé (Gulf of Guinea), with a provisional checklist of the terrestrial herpetofauna of São Tomé, Príncipe and Annobon islands. *Zootaxa*, 4387:91–108..
- CERÍACO, L.M.P., M.P. MARQUES, A. SCHMITZ, AND A.M. BAUER. 2016. The “Cobra-preta” of São Tomé Island, Gulf of Guinea, is a new species of *Naja* Laurenti, 1768 (Squamata: Elapidae). *Zootaxa*, 4324(1): 121–141.
- CHANNING, A. 1989. Comments on a review of the amphibians of Natal. *Lammergeyer*, 40:1–3.
- CHANNING, A. 2001. *Amphibians of Central and Southern Africa*. Cornell University Press, Ithaca, New York, USA. x + 470 pp., 24 pp. pls.
- CHANNING, A., AND N. BAPTISTA. 2013. *Amietia angolensis* and *A. fuscigula* (Anura: Pyxicephalidae) in southern Africa: A cold case reheated. *Zootaxa*, 3640:501–520.
- CHANNING, A., AND J.P. BOGART. 1996. Description of a tetraploid *Tomopterna* (Anura: Ranidae) from South Africa. *South African Journal of Zoology*, 31:80–85.
- CHANNING, A., AND D.G. BROADLEY. 2002. A new snout-burrower from the Barotse Floodplain (Anura: Hemisotidae: *Hemisus*). *Journal of Herpetology*, 36(3):367–372.
- CHANNING, A., AND K.M. HOWELL. 2006. *Amphibians of East Africa*. Cornell University Press, Ithaca, New York, USA. xi + 432 pp., 24 pp. pls.
- CHANNING, A., J.M. DEHLING, S. LÖTTERS, AND R. ERNST. 2016. Species boundaries and taxonomy of the African river frogs (Amphibia: Pyxicephalidae: *Amietia*). *Zootaxa*, 4155: 1–76.
- CHANNING, A., L.H. DU PREEZ, AND N.I. PASSMORE. 1994. Status, vocalization and breeding biology of two species of African bullfrogs (Ranidae: *Pyxicephalus*). *Journal of Zoology, London*, 234:141–148.
- CHANNING, A., A. HILERS, S. LÖTTERS, M.-O. RÖDEL, S. SCHICK, W. CONRADIE, D. RÖDDER, V. MERCURIO, P. WAGNER, J.M. DEHLING, L.H. DU PREEZ, J. KIELGAST, AND M. BURGER. 2013. Taxonomy of the super-cryptic *Hyperolius nasutus* group of long reed frogs of Africa (Anura: Hyperoliidae), with descriptions of six new species. *Zootaxa*, 3620:301–350.
- CHANNING, A., D.C. MOYER, AND M. BURGER. 2002. Cryptic species of sharp-nosed reed frogs in the *Hyperolius nasutus* complex: advertisement call differences. *African Zoology*, 37:91–99.
- CHIPPAUX, J.-P. 2006. *Les Serpents d’Afrique Occidentale et Centrale*. IRD Editions, Collection Faune et Flore Tropicales, Paris, France. 311 pp.
- CHIRIO, L., AND I. INEICH. 1991. Les genres *Rhamphiphis* Peters, 1854 et *Dipsina* Jan, 1863 (Serpentes, Colubridae): revue des taxons reconnus et description d’une espèce nouvelle. *Bulletin du Muséum National d’Histoire Naturelle*, 4^e série, Section A. Zoologie, 13(1–2):217–235.
- CHIRIO, L., AND I. INEICH. 2006. Biogeography of the reptiles of the Central African Republic. *African Journal of Herpetology*, 55(1):23–59.
- CHIRIO, L., AND M. LEBRETON. 2007. *Atlas des Reptiles du Cameroun*. Publications Scientifiques du Muséum national d’Histoire naturelle/IRD Éditions, Paris, France. 686 pp.
- CLARK, V.R., N.P. BARKER, AND L. MUCINA. 2011. The great escarpment of southern Africa: a new frontier for biodiversity exploration. *Biodiversity Conservation*, 20:2543–2561.
- COCHRAN, D.M. 1961. Type specimens of reptiles and amphibians in the U.S. National Museum. *Bulletin of the United States National Museum*, 220:1–291.
- CONRADIE, W., W.R. BRANCH, G.J. MEASEY, AND K.A. TOLLEY. 2012. A new species of *Hyperolius* Rapp, 1842 (Anura: Hyperoliidae) from the Serra da Chela Mountains, south-western Angola. *Zootaxa*, 3269:1–17.
- CONRADIE, W., G.J. MEASEY, W.R. BRANCH, AND K.A. TOLLEY. 2012. Revised phylogeny of African sand lizards (*Pedioplanis*), with the description of two new species from south-western Angola. *African Journal of Herpetology*, 61(2):91–112.
- CONRADIE, W., W.R. BRANCH, AND K.A. TOLLEY. 2013. Fifty shades of grey: giving colour to the poorly known Angolan Ashy reed frog (Hyperoliidae: *Hyperolius cinereus*), with the description of a new species. *Zootaxa*, 3635(3):201–223.
- CONRADIE, W., W.R. BRANCH, AND G. WATSON. 2015. Type specimens in the Port Elizabeth Museum, South Africa, including the historically important Albany Museum collection. Part 1: Amphibians.

- Zootaxa*, 3936:42–70.
- CONRADIE, W., R. BILLS, AND W.R. BRANCH. 2016. The herpetofauna of the Cubango, Cuito, and lower Cuan-do river catchments of south-eastern Angola. *Amphibian & Reptile Conservation*, 10(2):6–36.
- COPE, E.D. “1860” 1861. Descriptions of new species of the reptilian genera *Hyperolius*, *Liuperus* and *Tropidodipsas*. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 12:517–518.
- COPE, E.D. 1862. Notes upon some reptiles of the Old World. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 14:337–344.
- COPE, E.D. 1865. Sketch of the primary groups of Batrachia s. Salientia. *Natural History Review*, New Series, 5:97–120.
- CRAWFORD-CABRAL, J. 1987. Distributional data and notes on Angolan carnivores (Mammalia: Carnivora). *Garcia da Orta: Série de Zoologia*, 14(2):3–28.
- CRAWFORD-CABRAL, J. 1991. *Zoogeografia dos Vertebrados de Angola. Programa de Investigação*. Unpublished report, Instituto de Investigação Científica Tropical, Lisboa, Portugal. 59 pp + appendix.
- CRAWFORD-CABRAL, J. 1998. *The Angolan Rodents of the Superfamily Muroidea: An Account of their Distribution*. Instituto de Investigação Científica Tropical, Lisboa, Portugal. 223 pp.
- CRAWFORD-CABRAL, J., AND L.M. MESQUITELA. 1989. *Índice Toponímico de Colheitas Zoológicas em Angola*. Instituto de Investigação Científica Tropical, Lisboa, Portugal. 206 pp.
- CRAWFORD-CABRAL, J., AND L.N. VERÍSSIMO. 2005. *The Ungulate Fauna of Angola: Systematic List, Distribution Maps, Database Report*. Instituto de Investigação Científica Tropical, Lisboa, Portugal. 277 pp.
- CUVIER, G., 1825. *Recherches sur les Ossemens Fossiles où l'on Rétablit les Caractères de Plusieurs Animaux dont les Révolutions du Globe ont Détruit les Espèces*, nouvelle édition, Tome Cinquième, II^e Partie. *Recherches sur les Ossemens Fossiles*. Huitième Partie. *Des Ossemens de Reptiles*. Dufour & D’Ocagne, Paris, France. 547 pp., 33 pls.
- DANIELS, S.R., N. [J.L.] HEIDEMAN, M.G.J. HENDRICKS, M.E. MOKONE, AND K.A. CRANDALL. 2005. Unraveling evolutionary lineages in the limbless fossorial skink genus *Acontias*: are subspecies equivalent systematic units? *Molecular Phylogenetics and Evolution*, 34:645–654.
- DANIELS, S.R., N. [J.L.] HEIDEMAN, M.G.J. HENDRICKS, AND K.A. CRANDALL. 2006. Taxonomic subdivisions within the fossorial skink subfamily Acontinae (Squamata: Scincidae) reconsidered: a multilocus perspective. *Zoologica Scripta*, 35(4):353–362.
- DAUDIN, F.M. 1802 [An X]. *Histoire Naturelle, Générale et Particulière des Reptiles, Ouvrage faisant Suite aux Oeuvres de Leclerc de Buffon, et Partie du Cours Complet d’Histoire Naturelle Rédigé par C. S. Sonnini, Membre de Plusieurs Sociétés Savantes*. Troisième Tome. F. Dufart, Paris, France. 452 pp., pls. 29–45.
- DAVID, P., AND I. INEICH. 1999. Les serpents venimeux du monde: systématique et repartition. *Dumérilia*, 3: 3–499.
- DAWOOD, A., AND A. CHANNING. 2002. Description of a new cryptic species of African sand frog, *Tomopterna damarensis* (Anura: Ranidae), from Namibia. *African Journl of Herpetology*, 51(2):129–134.
- DEAN, W.R.J. 2000. *The Birds of Angola. An Annotated Check-list. BOU Checklist No. 18*. British Ornithologists Union, Tring, United Kingdom. 433 pp.
- DEAN, W.R.J. 2001. Angola. Pages 71–91 in L.D.C. Fishpool, and M.I. Evans, eds., *Important Bird Areas in Africa and Associated Islands: Priority Sites for Conservation*. Pisces Publications and BirdLife International, Newbury and Cambridge, United Kingdom. xvi + 1144 pp.
- DE GRYS, P. 1938. *Gerrhosaurus Maltzahni* spec. nov. *Zoologischer Anzeiger*, 124(3/4):58–60.
- DENZER, W., R. GÜNTHER, AND U. MANTHEY. 1997. Kommentierter Typenkatalog der Agamen (Reptilia: Squamata: Agamidae) des Museums für Naturkunde der Humboldt-Universität zu Berlin (ehemals Zoologisches Museum Berlin). *Mitteilungen aus dem Zoologischen Museum in Berlin*, 73:309–332.
- DENZER, W., R. GÜNTHER, AND U. MANTHEY. 1997. Annotated type catalogue of the agamid lizards (Reptilia: Squamata: Agamidae) in the Museum für Naturkunde der Humboldt-Universität zu Berlin (former Zoological Museum Berlin). *Mitteilungen aus dem Zoologischen Museum in Berlin*, 73:309–332.
- DE WITTE, G.-F. 1919. Révision du genre *Phrynobatrachus* Günth. et description d’une espèce nouvelle. *Revue Zoologique Africaine*, 6:220–228.
- DE WITTE, G.-F. 1921. Description de batraciens nouveaux du Congo belge. *Revue Zoologique Africaine*, 9:

- 1–22.
- DE WITTE, G.-F. 1922. Description de reptiles nouveaux du Congo Belge. *Revue Zoologique Africaine*, 10: 66–71.
- DE WITTE, G.-F., AND R. LAURENT. 1942a. Liste des Lacertidae du Congo Belge et description d'une espèce nouvelle. *Revue de Zoologie et de Botanique Africaines*, 36(2):165–180.
- DE WITTE, G.-F., AND R. LAURENT. 1942b. Contribution à la fauna herpétologique du Congo Belge. *Revue de Zoologie et de Botanique Africaines*, 36(2):101–115.
- DE WITTE, G.-F. AND R. LAURENT. 1943. Contribution a la systématique des forms dégradées de la famille des Scincidae apparentées au genre *Scelotes* Fitzinger. *Mémoires de Musée Royal d'Histoire Naturelle de Belgique*, 2(26):1–44.
- DE WITTE, G.-F. AND R. LAURENT. 1947. Revision d'un groupe de Colubridae Africains genres *Calamelaps*, *Miodon*, *Aparallactus* et forms affines. *Mémoires de Musée Royal d'Histoire Naturelle de Belgique*, 2(29):1–134.
- DOBIEY, M., AND G. VOGEL. 2007. *Venomous Snakes of Africa/Giftschlangen Afrikas*. Terralog 15. Edition Chimaira, Frankfurt am Main, Germany. 150 pp.
- DOWELL, S.A., D.M. PORTIK, V. DE BUFFRÉNIL, I. INEICH, E. GREENBAUM, S.-O. KOLOKOTRONIS, AND E.R. HEKKALA. 2016. Molecular data from contemporary and historical collections reveal a complex story of cryptic diversification in the *Varanus* (*Polydaedalus*) *niloticus* species group. *Molecular Phylogenetics and Evolution*, 94B:591–604.
- DREWES, R.C., AND J.V. VINDUM. 1994. Amphibians of the Impenetrable Forest, southwest Uganda. *Journal of African Zoology*, 108:55–70.
- DRIESSEN-VAN HET REVE, J.J. 2006. *De Kunstkamera van Peter de Grote. De Hollandse Inbreng, Gereconstitueerd uit Brieven van Albert Seba en Johann Daniel Schumacher uit de Jaren 1711–1752*. Verloren, Hilversum, The Netherlands. 350 pp.
- DUMÉRIL, A.H.A. 1852. Familles des caméléoniens ou chélopodes. *Archives du Muséum d'Histoire Naturelle*, 6:257–262.
- DUMÉRIL, A.H.A. 1856. Note sur les reptiles du Gabon. *Revue et Magasin de Zoologie Pure et Appliquée*, Paris, 2^e série, 8:460–470.
- DUMÉRIL, A.M.C., AND G. BIBRON. 1839. *Erpétologie Générale ou Histoire Naturelle Complète des Reptiles*. Tome Cinquième, *Contenant l'Histoire de Quatre-vingt-trois Genres et de Deux Cent Sept Espèces des Trois Dernières Familles de l'Ordre des Sauriens, Savoir: les Lacertiens, les Chalcidiens et les Scincoïdiens*. Librairie Encyclopédique de Rore, Paris, France. viii + 854 pp., errata, 4 folding tables, pls. 37, 39, 39bis, 41bis, 51–54, 56–58.
- DUMÉRIL, A.M.C., AND G. BIBRON. 1841. *Erpétologie Générale ou Histoire Naturelle Complète des Reptiles*. Tome Huitième, *Comprenant l'Histoire Générale des Batraciens, et la Description des Cinquante-deux Genres et des Cent Soixante-trois Espèces des Deux Premiers Sous-ordres: Les Péromèles qui n'ont pas des Membres, et les Anoures qui sont Privés de la Queue*. Librairie Encyclopédique de Roret, Paris, France. [4] + iii + 792 pp., 5 folding tables, pls. 85–96.
- DUMÉRIL, A.M.C., AND A.H.A. DUMÉRIL. 1851. *Catalogue Méthodique de la Collection des Reptiles*. Gide et Baudry, Paris, France. iv + 224 pp.
- DUMÉRIL, A.M.C., G. BIBRON, AND A.H.A. DUMÉRIL. 1854. *Erpétologie Générale ou Histoire Naturelle Complète des Reptiles*. Tome Septième. Première partie. *Comprenant l'Histoire des Serpents non Venimeux*. Librairie Encyclopédique de Roret, Paris, France. vii + [4] + xvi + 780 pp., 1 folding table, pls. 59, 63, 70, 72, 75–82.
- DU PREEZ, L.H., AND V.C. CARRUTHERS. 2009. *A Complete Guide to the Frogs of Southern Africa*. Struik Nature, Cape Town, South Africa. 488 pp., CD-ROM.
- EATON, M.J., A. MARTIN, J. THORBJARNARSON, AND G. AMATO. 2009. Species-level diversification of African dwarf crocodiles (genus *Osteoleaemus*): a geographic and phylogenetic perspective. *Molecular Phylogenetics and Evolution*, 50:496–506.
- EDWARDS, S., B. VANHOODONCK, A. HERREL, J. MEASEY, AND A. TOLLEY. 2012. Convergent evolution associated with habitat decouples phenotype from phylogeny in a clade of lizards. *PLoS ONE* 7(12):e51636. DOI:10.1371/journal.pone.0051636.

- EDWARDS, S., W.R. BRANCH, B. VANHOODYDONCK, A. HERREL, G.J. MEASEY, AND K.A. TOLLEY. 2013. Taxonomic adjustments in the systematics of the southern African lacertid lizards (Sauria: Lacertidae). *Zootaxa*, 3669(2):101–114.
- EDWARDS, S., K.A. TOLLEY, B. VANHOODYDONCK, G.J. MEASEY, AND A. HERREL. 2013. Is dietary niche breadth linked to morphology and performance in Sandveld lizards *Nucras* (Sauria: Lacertidae)? *Biological Journal of the Linnean Society*, 110(3):674–688.
- EIMERMACHER, T.G. 2012. Phylogenetic Systematics of Dispholidine Colubrids (Serpentes: Colubridae). PhD Thesis, University of Texas at Arlington, Arlington, Texas, USA. 109 pp.
- ENGEL, H. 1937. The life of Albertus Seba. *Svenska Linné-Sällska-pets Årsskrift*, 20:75–100.
- ENGEL, H. 1961. The sale-catalogue of the cabinets of natural history of Albertus Seba (1752), a curious document from the period of the naturae curiosi. *Bulletin of the Research Council of Israel*, 10B:119–131.
- ENGLEDER, A., E. HARING, S. KIRCHHOF, AND W. MAYER. 2013. Multiple nuclear and mitochondrial DNA sequences provide new insights into the phylogeny of south african lacertids (Lacertidae, Eremiadinae). *Journal of Zoological Systematics and Evolutionary Research*, 51:132–143.
- ERNST, R., AND M.-O. RÖDEL. 2002. A new *Atheris* species (Serpentes: Viperidae), from Tai National Park, Ivory Coast. *The Herpetological Journal*, 12:55–61.
- ERNST, R., A.B.T. NIENGUESO, T. LAUTENSCHLÄGER, M.F. BAREI, A. SCHMITZ, AND M. HÖLTING. 2014. Relicts of a forested past: southernmost distribution of the hairy frogs genus *Trichobatrachus* Boulenger, 1900 (Anura: Arthroleptidae) in the Serra do Pingano region of Angola with comments on its taxonomic status. *Zootaxa*, 3779(2):297–300.
- ERNST, R., A. SCHMITZ, P. WAGNER, M.F. BRANQUIMA, AND M. HÖLTING. 2015. A window to central african forest history: distribution of the *Xenopus fraseri* subgroup south of the Congo basin, including a first country record of *Xenopus andrei* from Angola. *Salamandra*, 51(2):147–155.
- ESCHSCHOLTZ, F. 1829. *Zoologischer Atlas enthaltend Abildungen und Beschreibungen neuer Thierarten während des Flottcapitains von Kotzebue zweiter Reise um die Welt auf der Russisch-Kaiserlichen Krieges-schlupp Predpriaetië in den Jahren 1823–1826*. Erstes Heft. G. Reimer, Berlin, Germany. iv + 17 pp., 5 pls.
- EVANS B.J., T.F. CARTER, E. GREENBAUM, V. GVOŽDÍK D.B. KELLEY, P.J. MCLAUGHLIN, O.S.G. PAUWELS, D.M. PORTIK, E.L. STANLEY, R.C. TINSLEY, M.L. TOBIAS, AND D.C. BLACKBURN. 2015. Genetics, morphology, advertisement calls, and historical records distinguish six new polyploid species of African Clawed Frog (*Xenopus*, Pipidae) from west and central Africa. *PLoS ONE*, 10(12):e0142823. DOI:10.1371/journal.pone.0142823.
- FALK, K. 1925. Herpetologische Berichte aus Angola (Portugiesisch West-Afrika). *Blätter für Aquarien und Terrarienkunde*, 36:81–83.
- FENG, G., X. WU, P. YAN, AND X. LI. 2010. Two complete mitochondrial genes of and implications for crocodilian phylogeny. *Amphibia-Reptilia*, 31:299–309.
- FERGUSON, R.A. 2010. Nile Crocodile, *Crocodylus niloticus*. Pages 84–89 in S.C. Manolis and C. Stevenson, eds., *Crocodyles. Status Survey and Conservation Action Plan*, Third Edition. Crocodile Specialist Group, Darwin, Northern Territory, Australia.
- FERREIRA, J.B. 1897a. Sobre alguns reptis ultimamente enviados á secção zoológica do Museu de Lisboa. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 5:111–116.
- FERREIRA, J.B. 1897b. Lista dos reptis e amphibios que fazem parte da última remessa de J. D'Anchieta. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 5:240–246.
- FERREIRA, J.B. 1900a. Sobre alguns exemplares pertencentes à fauna do norte de Angola. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 6:48–54.
- FERREIRA, J.B. 1900b. Sobre a distribuição das cobras do género “*Naja*” em África. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 6:129–137.
- FERREIRA, J.B. 1903. Reptis de Angola da região norte do Quanza da collecção Pereira do Nascimento (1902). *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 7:9–16.
- FERREIRA, J.B. 1904. Reptis e amphibios de Angola da região ao norte do Quanza (Collecção Newton – 1903). *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 7:111–117.
- FERREIRA, J.B. 1906. Algumas espécies novas ou pouco conhecidas de amphibios e reptis de Angola (Collec-

- ção Newton - 1903). *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, Segunda Série, 7:159–171.
- FIGUEIREDO, E., G.F. SMITH, AND J. CÉSAR. 2009. The flora of Angola: first record of diversity and endemism. *Taxon*, 58(1):233–236.
- FIGUEROA, A., A.D. MCKELVY, L.L. GRISMER, C.D. BELL, AND S.P. LAILVAUX. 2016. A species-level phylogeny of extant snakes with description of a new colubrid subfamily and genus. *PLoS ONE*, 11(9):e0161070. DOI:10.1371/journal.pone.0161070.
- FISCHER, J.G. 1856. Neue Schlangen des Hamburgischen Naturhistorischen Museums. *Abhandlungen Naturwissenschaftlicher Verein in Hamburg*, 3(4):79–116, pls. 1–3.
- FISCHER, J.G. 1888. Über eine Kollektion Reptilien von Angra Pequenna. *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten*, 5:11–17.
- FISCHBERG, M., B. COLOMBELLI, AND J.-J. PICARD. 1982. Diagnose préliminaire d'une espèce nouvelle de *Xenopus* du Zaïre. *Alytes*, 1:53–55.
- FISHER M.C., AND T.W.J. GARNER. 2007. The relationship between the introduction of *Batrachochytrium dendrobatidis*, the international trade in amphibians and introduced amphibian species. *Fungal Biology Reviews*, 21:2–9.
- FISHER M.C., T. GARNER, AND J. WALKER. 2009. Global emergence of *Batrachochytrium dendrobatidis* and amphibian chytridiomycosis in space, time and host. *Annual Review of Microbiology*, 63:291–310.
- FITZSIMONS, V.F. 1932. Preliminary descriptions of new forms of South African Reptilia and Amphibia, from the Vernay-Lang Kalahari Expedition, 1930. *Annals of the Transvaal Museum*, 15(1):35–40.
- FITZSIMONS, V.F. 1935. Scientific results of the Vernay-Lang Kalahari Expedition, March to September, 1930. Reptilia and Amphibia. *Annals of the Transvaal Museum*, 16(2):295–397, pls. 10–11.
- FITZSIMONS, V.F. 1937. Notes on the reptiles and amphibians collected and described from South Africa by Andrew Smith. *Annals of the Transvaal Museum*, 17(4):259–274, pl. 10.
- FITZSIMONS, V.F. 1938. Transvaal Museum expedition to South-West Africa and Little Namaqualand, May to August 1937. Reptiles and amphibians. *Annals of the Transvaal Museum*, 19, 153–209, pls. 2–6, 1 map.
- FITZSIMONS, V.F. 1943. The lizards of South Africa. *Memoirs of the Transvaal Museum*, 1:xv + 528 pp., 24 pls., 1 folding map.
- FITZSIMONS, V.F. 1953. A new genus of gerrhosaurid from southern Angola. *Annals of the Transvaal Museum*, 22(2):215–217, pl. 17.
- FITZSIMONS, V.F. 1959. Some new reptiles from southern Africa and southern Angola. *Annals of the Transvaal Museum*, 23(4):405–409.
- FITZSIMONS, V.F. 1962. *Snakes of Southern Africa*. Purnell and Sons, Cape Town, South Africa. 423 pp., 43 pls., 75 color pls. (frontispiece + 74 numbered).
- FORCART, L. 1946. Katalog der Typusexemplares in der Amphibiensammlung des Naturhistorischen Museums zu Basel. *Verhandlungen der Naturforschenden Gesellschaft in Basel*, 57:118–142.
- FORSKÅL, P. 1775. *Descriptiones Animalium, Avium, Amphibiorum, Piscium, Insectorum, Vermium; quae in Itinere Orientali Observavit Petrus Forskål Prof. Haun. Post Mortem Auctoris Edidit Carsten Niebuhr. Adjuncta est Materia Medica Kahirina atque Tabula Maris Rubri Geographica*. Ex Officina Mölleri, Aulæ Typographi, Hauniae [Copenhagen], Denmark. 164 pp.
- FRADE, F. 1958. Mesures adoptées pour la protection de l'hippopotame géant en Angola. *Mammalia*, 22(3):476–477.
- FRADE, F. 1959. Medidas para a protecção da palanca gigante de Angola (*Hippopotamus niger varians* Thomas). *Memórias da Junta de Investigações do Ultramar*, segunda série, *Estudos de Zoologia*, 8:7–17.
- FRADE, F. 1963. Linhas gerais da distribuição dos vertebrados em Angola. *Memórias da Junta Investigações do Ultramar*, segunda série 43:241–257.
- FRANKE, F.A., F. SCHMIDT, C. BORGWARDT, D. BERNHARD, C. BLEIDORN, W.-E. ENGELMANN, AND M. SCHLEGEL. 2013. Genetic differentiation of the African dwarf crocodile *Osteoleaemus tetraspis* Cope, 1861 (Crocodylia: Crocodylidae) and consequences for European zoos. *Organisms Diversity & Evolution*, 13(2):255–266.
- FRANZEN, M., AND F. GLAW. 2007. Type catalogue of reptiles in the Zoologische Staatssammlung München. *Spixiana*, 30(2):201–274.
- FRÉTEY, T., M. DEWYNTER, AND C.P. BLANC. 2011. *Amphibiens d'Afrique central et d'Angola. Clé de Déter-*

- mination *Illustrée des Amphibiens du Gabon et du Mbini/Illustrated Identification Key of the Amphibians from Gabon and Mbini*. Biotope, Mèze/Muséum national d'Histoire naturelle, Paris, France. 232 pp.
- FRITZ, U., AND O.R.P. BININDA-EMONDS. 2007. When genes meet nomenclature: tortoise phylogeny and the shifting genetic concepts of *Testudo* and *Geochelone*. *Zoology*, 110:298–307.
- FRITZ, U., AND P. HAVAŠ. 2007. Checklist of chelonians of the world. *Vertebrate Zoology*, 57(2):149–368.
- FRITZ, U., W.R. BRANCH, M.D. HOFMEYR, J. MARAN, H. PROKOP, A. SCHLEICHER, P. ŠIROKÝ, H. STUCKAS, M. VARGAS-RAMÍREZ, M. VENCES, AND A.K. HUNSDÖRFER. 2011. Molecular phylogeny of African hinged and helmeted terrapins (Testudines: Pelomedusidae: *Pelusios* and *Pelomedusa*). *Zoologica Scripta*, 40:115–125.
- FRITZ, U., S.R. DANIELS, M.D. HOFMEYR, J. GONZÁLEZ, C.L. BARRIO-AMORÓS, P. ŠIROKÝ, A.K. HUNSDÖRFER, AND H. STUCKAS. 2010. Mitochondrial phylogeography and subspecies of the wide-ranging, sub-Saharan leopard tortoise *Stigmochely pardalis* (Testudines: Testudinidae) – a case study of the pitfalls of pseudogenes and GenBank sequences. *Journal of Zoological Systematics and Evolutionary Research*, 48: 348–359.
- FRITZ, U., A. PETZOLD, C. KEHLMAYER, C. KINDLER, P. CAMPBELL, M.D. HOFMEYR, AND W. BRANCH. 2014. Disentangling the *Pelomedusa* complex using type specimens and historical DNA (Testudines: Pelomedusidae). *Zootaxa*, 3795(5):501–522.
- FROST, D.R. 1985. *Amphibian Species of the World. A Taxonomic and Geographical Reference*. Association of Systematics Collections and Allen Press, Lawrence, Kansas, USA. v + 732 pp.
- FROST, D.R. 2016. *Amphibian Species of the World: An Online Reference*. Version 6.0 (28-11-2016). Electronic database accessible at <<http://research.amnh.org/herpetology/amphibia/index.html>>. American Museum of Natural History, New York, USA.
- FROST, D.R., T. GRANT, J. FAIVOVICH, R.H. BAIN, A. HAAS, C.F.B. HADDAD, R.O. DE SÁ, A. CHANNING, M. WILKINSON, S.O. DONNELLAN, C.J. RAXWORTHY, J.A. CAMPBELL, B.L. BLOTTO, P. MOLER, R.C. DREWES, R.A. NUSSBAUM, J.D. LYNCH, D.M. GREEN, AND W.C. WHEELER. 2006. The amphibian tree of life. *Bulletin of the American Museum of Natural History*, 297:1–370, 1 folding phylogenetic tree.
- FUCHS, K., R. MERTENS, AND H. WERMUTH. 1974a. Die Unterarten des Nilkrokodils, *Crocodylus niloticus*. *Salamandra*, 10:17–114.
- FUCHS, K., R. MERTENS, AND H. WERMUTH. 1974b. Zum Status von *Crocodylus cataphractus* und *Osteolaemus tetraspis*. *Stuttgarter Beiträge zur Naturkunde, Serie A*, 266:1–8.
- FUHN, I.E. 1972. Révision du phylum forestier du genre *Panaspis* Cope (Reptilia, Scincidae, Lygosominae). *Revue Roumaine de Biologie*, 17(4):257–271.
- FURMAN, B.L.S., A.J. BEWICK, T.L. HARRISON, E. GREENBAUM, V. GVOŽDÍK, C. KUSAMBA, AND B.J. EVANS. 2015. Pan-african phylogeography of a model organism the African clawed frog “*Xenopus laevis*.” *Molecular Ecology*, 24:909–925.
- GASSÓ MIRACLE, M.E., L.W. VAN DEN HOEK OSTENDE, AND J.W. ARNTZEN. 2007. Type specimens of amphibians in the National Museum of Natural History, Leiden, The Netherlands. *Zootaxa*, 1482:25–68.
- GANS, C. 1959. A taxonomic revision of the African snake genus «*Dasypeltis*» (Reptilia: Serpentes). *Annales du Musée Royal du Congo Belge, Tervuren (Belgique)*, série in-8°, *Sciences Zoologiques*, 74:1–237, pls. 1–12.
- GANS, C. 1967. A check list of recent amphisbaenians (Amphisbaenia, Reptilia). *Bulletin of the American Museum of Natural History*, 135:61–106.
- GANS, C. 1976. Three new spade-snouted amphisbaenians from Angola (Amphisbaenia, Reptilia). *American Museum Novitates*, 2590:1–11.
- GANS, C. 2005. Checklist and bibliography of the Amphisbaenia of the world. *Bulletin of the American Museum of Natural History*, 289:1–130.
- GANS, C., A.M. BAUER, AND R. GÜNTHER. 1997. An annotated type catalogue of the amphisbaenians (Reptilia: Squamata: Amphisbaenia) in the Zoological Museum, Berlin. *Mitteilungen aus dem Zoologischen Museum in Berlin*, 73:41–50.
- GAVETTI, E., AND F. ANDREONE. 1993. *Revised Catalogue of the Herpetological Collection in Turin University I. Amphibia*. Cataloghi X. Museo Regionale di Scienze Naturali Torino, Torino, Italy. 185 pp.
- GILLES, S., A. NAGO, O. GRELL, B. SINSIN, AND M.-O. RÖDEL. 2006. The amphibian fauna of Pendjari Nation-

- al Park and surroundings, northern Benin. *Salamandra*, 42:93–108.
- GLAW, F. 2015. Taxonomic checklist of chameleons (Squamata: Chamaeleonidae). *Vertebrate Zoology*, 65(2):167–246.
- GMELIN, J.F. 1789. *Caroli a Linne... Systema Naturae per Regna Tria Natural, Secundum Classes, Ordines, Genera, Species, cum Characteribus Differentilis, Synonymis, Locis*. Tomus I, Editio decima tertia, aucta, reformata. Pars III. *Amphibia et Pisces*. Georg. Emanuel Beer, Leipzig, Germany. Pp.1038–1516.
- GOLAY, P., H.M. SMITH, D.G. BROADLEY, J.R. DIXON, C. MCCARTHY, J.-C. RAGE, B. SCHÄTTI, AND M. TORIBA. 1993. *Endoglyphs and Other Major Venomous Snakes of the World. A Checklist*. Azemiops Herpetological Data Center, Aïre-Geneva, Switzerland. xv + 478 pp.
- GOMES, B.A. 1876. The collections of the African scientific expedition ordered by the Portuguese government in 1851 and the right of this government to them, as brought before the English courts of justice. *Jornal de Ciencias Mathematicas, Physicas e Naturaes*, 5(19):175–202.
- GONÇALVES, F.M.P., D.J. GOYDER. 2016. A brief botanical survey into Kumbira forest, an isolated patch of Guineo-Congolian biome. *PhytoKeys*, 65:1–14.
- GRAMENTZ, D. 2008. *African Flapshell Turtles, Cyclanorbis and Cycloderma*. Edition Chimaira, Frankfurt am Main, Germany. 191 pp.
- GRANDVAUX-BARBOSA, L.A. 1970. *Carta Fitogeográfica de Angola*. Instituto de Investigação Científica de Angola, Luanda, Angola. xii + [ii] + 323 pp., 2 folding maps.
- GRAY, J.E. 1831a. *Synopsis Reptilium or Short Descriptions of the Species of Reptiles. Part I: Cataphracta, Tortoises, Crocodiles, and Enaliosaurians*. Treuttel, Wurz & Co., London, United Kingdom. viii + 78 + [2] pp., 11 pls.
- GRAY, J.E. 1831b. Description of a new species of chamaeleon discovered by Capt. Owen in Africa. *Zoological Miscellany*, 1:7, pl. 4.
- GRAY, J.E. 1838. Catalogue of the slender-tongued saurians, with descriptions of many new genera and species. *Annals and Magazine of Natural History, Series 1*, 2:287–293.
- GRAY, J.E. 1845. *Catalogue of the Specimens of Lizards in the Collection of the British Museum*. Trustees of the British Museum, London, United Kingdom. xxviii + 289 pp.
- GRAY, J.E. 1863a. Notice of a new species of *Kinixys* and other tortoises from central Africa. *Annals and Magazine of Natural History, Series 3*, 12:381–382.
- GRAY, J.E. 1863b. Descriptions of two new genera of lizards (*Holaspis* and *Poriodogaster*, A. Smith, MS.). *Proceedings of the Zoological Society of London*, 1863:152–155, pls. 10–11.
- GRAY, J.E. 1864. Notes on some new lizards from south-eastern Africa, with the descriptions of several new species. *Proceedings of the Zoological Society of London*, 1864:58–62.
- GRAY, J.E. 1865a. A revision of the genera and species of amphisbaenians, with the description of some new species now in the collection of the British Museum. *Proceedings of the Zoological Society of London*, 1865:442–455.
- GRAY, J.E. 1865b. A revision of the genera and species of amphisbaenians with the descriptions of some new species now in the collection of the British Museum. *Annals and Magazine of Natural History, Series 3*, 16:365–377.
- GREEF, R. 1884. Ueber die Fauna der Guinea-inseln S. Thomé und Rolas. *Sitzungsberichte der Gesellschaft zur Beförderung der gesamten Naturwissenschaften zu Marburg*, 1884(2):41–80.
- GREEN, D.M., L.A. WEIR, G.S. CASPER, AND M. LANNOO. 2014. *North American Amphibians. Distribution and Diversity*. University of California Press, Berkeley, California, USA. x + 340 pp.
- GREENBAUM, E., F. PORTILLO, K. JACKSON, AND C. KUSAMBA. 2015. A phylogeny of central African *Boaedon* (Serpentes: Lamprophiidae), with the description of a new cryptic species from the Albertine Rift. *African Journal of Herpetology*, 64(1):18–38.
- GREER, A.E. 1967. The generic relationships of the African scincid genus *Eumecia*. *Breviora*, 276:1–9.
- GREER, A.E. 1974. The generic relationships of the scincid lizard genus *Leiopisma* and its relatives. *Australian Journal of Zoology*, Supplement Series, 31:1–67.
- GRIFFIN, M. 2003. *Annotated Checklist and Provisional National Conservation Status of Namibian Reptiles*. Namibia Scientific Society, Windhoek, Namibia. [ii] + 169 pp.
- GRIGG, G., AND D. KIRSHNER. 2015. *Biology and Evolution of Corcodylians*. CSIRO Publishing, Clayton

- South, Victoria, Australia. xviii + [2] + 649 pp.
- GRILLITSCH, H., E. SCHLEIFFER, AND F. TIEDEMANN. 1996. Katalogue der Trockenpräparate der Herpetologischen Sammlung des Naturhistorischen Museums in Wien. Stand: 31. Dezember 1995. *Kataloge der wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien*, 11 (Vertebrata 5):1–137.
- GRONOVIVS, L. T. 1756. *Musei Ichthyologici Tomus Secundus sistens Piscium Indigenorum & Nonnullorum Exoticorum, quorum Maxima Pars in Museo Laurentii Theodori Gronovii, J. U. D. Adservantur, nec non Quorundam in Aliis Museis Observatorum Descriptiones. Accedunt Nonnullorum Exoticorum Piscium Icones Aeri Incisae, et Amphibiorum Animalium Historia Zoologica*. Haak, Lugduni Batavorum [Leiden], The Netherlands. [7] + 88 pp, 3 pls.
- GUIBÉ, J. 1950. *Catalogue des Types d'Amphibiens du Muséum National d'Histoire Naturelle*. Imprimerie Nationale, Paris, France. 71 pp.
- GUIBÉ, J. 1954. *Catalogue des Types de Lézards du Muséum National d'Histoire Naturelle*. Colas, Paris, France. 119 pp.
- GUIBÉ, J., AND M. LAMOTTE. 1957. Révision systématique des *Ptychadena* (batraciens, Anoures Ranidés) d'Afrique occidentale. *Bulletin de l'Institut Française d'Afrique Noire, Série A, Sciences Naturelles*, 19:937–1003.
- GUIBÉ, J., AND M. LAMOTTE. 1961 “1960.” Deux espèces affines de batraciens africains longtemps confondues: *Ptychadena oxyrhynchus* (Smith) et *Pt. abyssinica* (Peters). *Bulletin du Museum National d'Histoire Naturelle. Paris*, 2^e série, 32:380–391.
- GÜNTHER, A.C.L.G. 1858a. Neue Batrachier in der Sammlung des Britischen Museums. *Archiv für Naturgeschichte*, 24:319–328.
- GÜNTHER, A.C.L.G. “1858b” 1859. *Catalogue of the Batrachia Salientia in the Collection of the British Museum*. Trustees of the British Museum (Natural History), London, United Kingdom. xvi + 160 pp., 12 pls.
- GÜNTHER, A.C.L.G. 1862. On new species of snakes in the collection of the British Museum [conclusion]. *Annals and Magazine of Natural History*, Series 3, 9:124–132, pls. 9–10.
- GÜNTHER, A.C.L.G. 1863. Third account of new species of snakes in the collection of the British Museum. *Annals and Magazine of Natural History*, Series 3, 12:348–365, pls. 5–6.
- GÜNTHER, A.C.L.G. 1864. Report on a collection of reptiles and fishes made by Dr. Kirk in the Zambesi and Nyassa regions. *Proceedings of the Zoological Society of London*, 1864:303–314, pls. 26–27.
- GÜNTHER, A.C.L.G. 1865a. Descriptions of new species of batrachians from West Africa. *Proceedings of the Zoological Society of London*, 1864:479–482, pl. 33.
- GÜNTHER, A.C.L.G. 1865b. Fourth account of new species of snakes in the collection of the British Museum. *Annals and Magazine of Natural History*, Series 3, 15:89–98, pls. 2–3.
- GÜNTHER, A.C.L.G. 1868. Sixth account of new species of snakes in the collection of the British Museum. *Annals and Magazine of Natural History*, Series 4, 1:413–429, pls. 17–19.
- GÜNTHER, A.C.L.G. “1868” 1869. First account of species of tailless batrachians added to the collection of the British Museum. *Proceedings of the Zoological Society of London*, 1868:478–490, pls. 37–40.
- GÜNTHER, A.C.L.G. 1876a. Statement regarding Dr. Welwitsch's Angolan Reptiles. *Jornal de Sciencias Mathematicas, Physicas e Naturaes*, 5:275–276.
- GÜNTHER, A.C.L.G. 1876b. Notes on a small collection brought by Lieut. L. Cameron, C. B., from Angola. *Proceedings of the Zoological Society of London*, 1876:678–679.
- GÜNTHER, A.C.L.G. 1881. Herpetology. Pages 229–230, pls. C–D in C.G. OATES, ed., *Matabele Land and the Victoria Falls: A Naturalist's Wanderings in the Interior of South Africa, from the Letters and Journals of the Late Frank Oates, F.R.G.S.* C. Kegan Paul & Co., London, United Kingdom. xliii + 383 pp.
- GÜNTHER, A.C.L.G. 1888. Contribution to the knowledge of snakes of tropical Africa. *Annals and Magazine of Natural History*, Series 6, 1:322–335, pls. 18–19.
- GÜNTHER, A.C.L.G. 1895. Notice of reptiles and batrachians collected in the eastern half of tropical Africa. *Annals and Magazine of Natural History*, Series 6, 15:523–529, pl. 21.
- HAACKE, W.D. 1965. Additional notes on the herpetology of South West Africa with descriptions of two new subspecies of geckos. *Chimbebasia*, 11:1–40.
- HAACKE, W.D. 1970. New herpetological records from South West Africa. *Annals of the Transvaal Museum*, 26(12):277–283.

- HAACKE, W.D. 1976a. The burrowing geckos of southern Africa, 2 (Reptilia: Gekkonidae). *Annals of the Transvaal Museum*, 30(2):13–28, pl. 1.
- HAACKE, W.D. 1976b. The burrowing geckos of southern Africa, 3 (Reptilia: Gekkonidae). *Annals of the Transvaal Museum*, 30(3):29–40, pls. 2–3.
- HAACKE, W.D. 1976c. The burrowing geckos of southern Africa. 5 (Reptilia: Gekkonidae). *Annals of the Transvaal Museum*, 30:71–90.
- HAACKE, W.D. 1981. The file-snakes of the genus *Mehelya* in southern Africa with special reference to South West Africa/Namibia. *Madoqua*, 12(4):217–224.
- HAACKE, W.D. 1982a. *Bufo lemairii* Boulenger, 1901, a new amphibian record for southern Africa. *Journal of the Herpetological Association of Africa*, 27:11–12.
- HAACKE, W.D. 1982b. Boy bites attacking python to death. *Journal of Herpetological Association of Africa*, 28:8–10.
- HAACKE, W.D. 1984. The herpetology of the southern Kalahari domain. *Koedoe*, 1984, Supplement:171–186.
- HAACKE, W.D. 1985b. Occurrence of the spotted bush-snake (*Philothamnus semivariegatus semivariegatus*) in the arid south-west of southern Africa. *Journal of the Herpetological Association of Africa*, 31:7–9.
- HAACKE, W.D. 1997. Systematics and biogeography of the southern African scincine genus *Typhlacontias* (Reptilia: Scincidae). *Bonner Zoologische Beiträge*, 47:139–163.
- HAACKE, W.D. 2008. A new leaf-toed gecko (Reptilia: Gekkonidae) from south-western Angola. *African Journal of Herpetology*, 57(2):85–92.
- HAACKE, W.D. 2013. Description of a new tiger snake (Colubridae, *Telescopus*) from south-western Africa. *Zootaxa*, 3737:280–288.
- HAACKE, W.D., AND H. FINKELDEY. 1967. The Angolan garter snake *Elapsoidea sundevalli semiannulata* Bocage, a new record from southern Africa. *S.W.A. Scientific Society Special Publication* 8:2–12.
- HAACKE, W.D., AND F.J. ODENDAAL. 1981. The distribution of the genus *Rhoptropus* (Reptilia, Gekkonidae) in the central Namib Desert. *Madoqua*, 12(4):199–215.
- HAAGNER, G.V., W.R. BRANCH, AND A.J.F. HAAGNER. 2000. Notes on a collection of reptiles from Zambia and adjacent areas of the Democratic Republic of Congo. *Annals of the Eastern Cape Museums*, 1:1–25.
- HAHN, D.E. 1980. Liste der rezenten Amphibien und Reptilien. Anomalepididae, Leptotyphlopidae, Typhlopidae. *Das Tierreich*, 101. Walter de Gruyter, Berlin, Germany. xii + 93 pp.
- HÄKANSSON, T., AND T. MADSEN. 1983. On the distribution of the Black Mamba (*Dendroaspis polylepis*) in West Africa. *Journal of Herpetology*, 17(2):186–187.
- HALL, B.P. 1960. The faunistic importance of the scarp of Angola. *Ibis*, 102:420–422.
- HALLERMANN, J. 1998. Annotated catalogue of the type specimens of the herpetological collection in the Zoological Museum of the University of Hamburg. *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, 95:197–223.
- HALLOWELL, E. 1842. Description of a new genus of serpents from western Africa. *Journal of the Academy of Natural Sciences of Philadelphia*, 8:336–338.
- HALLOWELL, E. 1844. Descriptions of new species of African reptiles. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 2:58–62.
- HALLOWELL, E. “1844” 1845. Description of new species of African reptiles. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 2:169–172.
- HALLOWELL, E. 1852a. Descriptions of new species of Reptilia from western Africa. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 6:62–65.
- HALLOWELL, E. 1852b. On a new genus and two new species of African serpents. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 6:203–205.
- HALLOWELL, E. 1854. Remarks on the geographic distribution of reptiles, with descriptions of several species supposed to be new, and corrections of former papers. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 7:98–105.
- HALLOWELL, E. “1854” 1855. Descriptions of new reptiles from Guinea. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 7:193–194.
- HALLOWELL, E. 1856. Notes on Reptilia in the collection of the Museum of the Academy of Natural Sciences. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 8:146–153.

- HALLOWELL, E. 1857. Notes of a collection of reptiles from the Gaboon country, west Africa, recently presented to the Academy of Natural Sciences of Philadelphia, by Dr. Henry A. Ford. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 9:48–72.
- HAMPTON, P.M. 2010. *Causus rhombeatus* (Rhombic Night Adder). Prey size. *Herpetological Review*, 41(2):234–235.
- HANSEN, M.C., P.V. POTAPOV, R. MOORE, M. HANCHER, S.A. TURUBANOVA, TYUKAVINA, A., D. THAU, S.V. STEHMAN, S.J. GOETZ, T.R. LOVELAND, A. KOMMAREDDY, A. EGOROV, L. CHINI, C.O. JUSTICE, AND J.R.G. TOWNSEND. 2013. High resolution global maps for 21st century forest cover change. *Science*, 342:850–853.
- HARRIS, D.M., AND A.G. KLUGE. 1984. The *Sphaerodactylus* (Sauria: Gekkonidae) of Middle America. *Occasional Papers of the Museum of Zoology, University of Michigan*, 706:1–59.
- HASSELQUIST, F. 1757. *Iter Palæstinum eller Resa til Heliga Landet, Förrättad ifrån år 1749 til 1752, med Beskrifningar, Rön, Anmärkningar, öfver de Märkvärdigaste Naturalier, på Hennes Kongl. Maj:ts Befallning. Utgifven af Carl Linnæus*. Lars Salvii [Lars Salvius], Holmiæ [Stockholm], Sweden. [15] + 619 pp., 1 pl.
- HÄUPL, M., AND F. TIEDEMANN. 1978. Typenkatalog der Herpetologischen Sammlung. *Kataloge der wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien*, 2(Vertebrata 1):1–35.
- HÄUPL, M., F. TIEDEMANN, AND H. GRILLITSCH. 1994. Katalog der Typen der Herpetologischen Sammlung nach dem Stand vom 1. Jänner 1994. *Kataloge der wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien*, 9(Vertebrata 3):1–46.
- HEDGES, S.B., A.B. MARION, K.M. LIPP, J. MARIN, AND V. VIDAL. 2014. A taxonomic framework for typhlopoid snakes from the Caribbean and other regions (Reptilia, Squamata). *Caribbean Herpetology*, 49:1–61.
- HEINICKE, M.P., L.M.P. CERIACO, M. MOORE, A.M. BAUER, AND D.C. BLACKBURN. 2017. The Damaraland Sand Frog, *Tomopterna damarensis* (Anura: Pyxicephalidae), is broadly distributed in Namibia and Angola. *Salamandra*, 53(3):461–465.
- HEINICKE, M.P., J.D. DAZA, E. GREENBAUM, T.R. JACKMAN, AND A.M. BAUER. 2014. Phylogeny, taxonomy and biogeography of a circum-Indian Ocean clade of leaf-toed geckos (Reptilia: Gekkota), with a description of two new genera. *Systematics and Biodiversity*, 12(1):23–42.
- HEINICKE, M.P., T.R. JACKMAN, AND A.M. BAUER. 2017. The measure of success: geographic isolation promotes diversification in *Pachydactylus* geckos. *BMC Evolutionary Biology*, 17:9 [17 pages]. <<https://doi.org/10.1186/s12862-016-0846-2>>.
- HEINZ, H.M. 2011. Comparative Phylogeography of Two Widespread Geckos from the Typically Narrow-ranging *Pachydactylus* Group in Southern Africa. Unpublished M.S. Thesis, Villanova University, Villanova, Pennsylvania, USA. viii + 107 + [1] pp.
- HEKKALA, E.R., G. AMATO, R. DESALLE, AND M.J. BLUM. 2010. Molecular assessment of population differentiation and individual assignment potential of Nile crocodile (*Crocodylus niloticus*) populations. *Conservation Genetics*, 11:1435–1443.
- HELLMICH, W. 1957a. Herpetologische Ergebnisse einer Forschungsreise in Angola. *Veröffentlichungen der Zoologischen Staatssammlung München*, 5:1–92.
- HELLMICH, W. 1957b. Die Reptilienausbeute der hamburgischen Angola-Expedition. *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, 55:39–80.
- HELLMICH, W. AND D. SCHMELCHER. 1956. Eine neue Rasse von *Gerrhosaurus nigrolineatus* Hallowell (Gerrhosauridae). *Zoologischer Anzeiger*, 156(7/8):202–205.
- HENLE, K., AND W. BÖHME. 2003. A new species of *Hemidactylus* (Squamata: Gekkonidae) from West Africa, and comments on species hitherto confused with *H. muriceus*. *African Journal of Herpetology*, 52(1): 23–38.
- HERRMANN, H-W., AND W.R. BRANCH. 2013. Fifty years of herpetological research in the Namib Desert and Namibia with an updated and annotated species checklist. *Journal of Arid Environments*, 93(2013): 94–115.
- HEWITT, J. 1926a. Descriptions of new and little-known lizards and batrachians from South Africa. *Annals of the South African Museum*, 20:413–431, pls. 35–37.
- HEWITT, J. 1926b. Some new or little-known reptiles and batrachians from South Africa. *Annals of the South*

- African Museum*, 20:473–490, pls. 44–45.
- HEWITT, J. 1927. Further descriptions of reptiles and batrachians from South Africa. *Records of the Albany Museum*, 3:371–415, pls. 20–24.
- HEWITT, J. 1932. Some new species and subspecies of south african batrachians and lizards. *Annals of the Natal Museum*, 7(1):105–128, pl. 6.
- HEWITT, J. 1935. Some new forms of batrachians and reptiles from South Africa. *Records of the Albany Museum*, 4:283–357, pls. 27–36.
- HIJMANS, R.J., S.E. CAMERON, J.L. PARRA, P.G. JONES, AND A. JARVIS. 2005. Very high resolution interpolated climate surfaces for global land areas. *International Journal of Climatology*, 25:1965–1978.
- HIRTH, H.F. 1997. Synopsis of the biological data on the green turtle, *Chelonia mydas* (Linnaeus 1758). *United States Fish and Wildlife Service Biological Report*, 97(1):1–120.
- HOF, C., M.B. ARAÚJO, W. JETZ, AND R. CARSTEN. 2011. Additive threats from pathogens, climate and land-use change for global amphibian diversity. *Nature*, 480:516–519.
- HOOGMOED, M.S. 1974. Ghanese lizards of the genus *Mabuya* (Scincidae, Sauria, Reptilia). *Zoologische Verhandelingen*, 138:1–62, pls. 1–6.
- HORTON, D.R. 1972. A new scincid genus from Angola. *Journal of Herpetology*, 6:17–20.
- HOSER, R.T. 2013. A formal five-way division of the Gaboon Viper species complex: *Bitis* (*Macrocerastes*) *gabonica* (Duméril, Bibron and Duméril, 1854) and a two-way division of the nose-horned viper species complex *Bitis* (*Macrocerastes*) *nasicornis* (Shaw, 1802) (Serpentes: Viperidae: Bitisini). *Australasian Journal of Herpetology*, 16:25–31.
- HUGHES, B. 1976. Zoogeography of West African false cobras (*Pseudohaje* spp.). *Bulletin de l'Institut Fondamental d'Afrique Noire*, Série A, 38(2):457–466.
- HUGHES, B. 1978. Latitudinal clines and ecogeography of the West African Night Adder, *Causus maculatus* (Hallowell, 1842), Serpentes, Viperidae. *Bulletin de l'Institut Fondamental d'Afrique Noire*, Série A, 39(2):358–384.
- HUGHES, B. 1979. Occurrence of the freshwater trionychid turtles *Cyclanorbis elegans* and *C. senegalensis* in Ghana. *Bulletin de l'Institut Fondamental d'Afrique Noire*, Série A, 41(1):13–205.
- HUGHES, B. 1985. Progress on a taxonomic revision of the African green tree snakes (*Philothamnus* spp.). Pages 511–530 in K.-L. Schuchmann, ed., *Proceedings of the International Symposium on African Vertebrates. Systematics, Phylogeny and Evolutionary Ecology*. Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, Germany. 585 pp.
- HUGHES, B. 2004. Misidentification of *Dromophis lineatus* (Duméril & Bibron, 1854) as *Psammophis sibilans* (Linné, 1758) and the perpetuation of error. *African Journal of Herpetology*, 53(1):63–76.
- HUGHES, B. 2013. Snakes of Bénin, West Africa. *Bulletin de la Société Herpétologique de France*, 144: 101–159.
- HUGHES, B., AND D.H. BARRY. 1969. The snakes of Ghana: a checklist and key. *Bulletin de l'Institut Fondamental d'Afrique Noire*, Série A, 31:1004–1041.
- HUGHES, B., AND E. WADE. 2002. On the African leopard whip snake, *Psammophis leopardinus* Bocage, 1887 (Serpentes, Colubridae), with the description of a new species from Zambia. *Bulletin of Natural History Museum, London (Zoology)*, 68(2):75–81.
- HULSELMANS, J.L.J. 1969. A new species of *Bufo* from South-West Africa. *Revue de Zoologie et Botanique Africaines*, 79:393–402.
- HUNTLEY, B. 1974. Outlines of wildlife conservation in Angola. *South African Journal of Wildlife Research*, 4(3):157–166.
- HUNTLEY, B., AND E.M. MATOS. 1994. Botanical diversity and its conservation in Angola. *Strelitzia*, 1:53–74.
- ICZN [International Commission on Zoological Nomenclature]. 1999. *International Code of Zoological Nomenclature*, Fourth Edition. The International Trust for Zoological Nomenclature, London, United Kingdom. xxix + 306 pp.
- ICZN [International Commission on Zoological Nomenclature]. 2005. Opinion 2104. *Bulletin of Zoological Nomenclature*, 62:55.
- INEICH, I. 2003. Contribution à la connaissance de la biodiversité des régions afro-montagnardes: les reptiles du mont Nimba. Pages 597–637 in M. Lamotte, and R. Roy, eds., *Le Peuplement Animal du Mont*

- Nimba* (Guinée, Côte d'Ivoire, Liberia). *Mémoires du Muséum National d'Histoire Naturelle, Paris*, 190. 724 pp.
- INEICH, I., AND B. LE GARFF. 2015. A new lizard species for Gabon, *Ichnotropis bivittata* Bocage, 1866 (Squamata, Lacertidae). *Herpetology Notes*, 8:471–478.
- INEICH, I., AND A. SCHMITZ. 2010. *Panaspis cabindae*. The IUCN Red List of Threatened Species 2010: e.T178531A7565389. <<http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T178531A7565389.en>>. Downloaded on 27 December 2016.
- INGER, R.F. 1959. Amphibia. Pages 510–553 in B. Hanström, ed., *South African Animal Life. Results of the Lund University Expedition in 1950–1951*. Volume 6. Almqvist & Wiksell, Uppsala, Sweden.
- IUCN. 2001. *IUCN Red List Categories and Criteria*. Version 3.1. Second Edition. IUCN, Gland, Switzerland and Cambridge, United Kingdom. iv + 32 pp.
- IUCN, CONSERVATION INTERNATIONAL, AND NATURESERVE. 2004. Global Amphibian Assessment. www.global-amphibians.org (now accessible at IUCN Redlist: <<http://www.iucnredlist.org/>>).
- IUCN SSC AMPHIBIAN SPECIALIST GROUP. 2013a. *Leptopelis notatus*. The IUCN Red List of Threatened Species 2013: e.T56270A18388729. <<http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T56270A18388729.en>>. Downloaded on 18 December 2016.
- IUCN SSC AMPHIBIAN SPECIALIST GROUP. 2013b. *Leptopelis viridis*. The IUCN Red List of Threatened Species 2013: e.T56285A18390029. <<http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T56285A18390029.en>>. Downloaded on 18 December 2016.
- IUCN SSC AMPHIBIAN SPECIALIST GROUP. 2013c. *Phrynobatrachus plicatus*. The IUCN Red List of Threatened Species 2013: e.T58135A18395364. <<http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T58135A18395364.en>>. Downloaded on 18 December 2016.
- IUCN SSC AMPHIBIAN SPECIALIST GROUP. 2013d. *Xenopus andrei*. The IUCN Red List of Threatened Species 2013: e.T58169A18397553. <<http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T58169A18397553.en>>. Downloaded on 20 April 2018.
- IUCN SSC AMPHIBIAN SPECIALIST GROUP. 2016. *Sclerophrys regularis*. The IUCN Red List of Threatened Species 2016: e.T54747A107349840. <<http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T54747A107349840.en>>. Downloaded on 20 April 2018.
- IVERSON, J.B. 1986. *A Checklist with Distribution Maps of the Turtles of the World*. John P. Iverson, Richmond, Indiana, USA. viii + 282 pp.
- IVERSON, J.B. 1992. *A Revised Checklist with Distribution Maps of the Turtles of the World*. John P. Iverson, Richmond, Indiana, USA. xiii + 363 pp.
- JACOBSEN, N.H.G. 1989. A Herpetological Survey of the Transvaal. Ph.D. dissertation, University of Natal, Pietermaritzburg, KwaZulu-Natal, South Africa. 1618 pp.
- JACOBSEN, N.H.G., AND D.G. BROADLEY. 2000. A new species of *Panaspis* Cope (Reptilia: Scincidae) from southern Africa. *African Journal of Herpetology*, 49(1):61–71.
- JACOBSEN, N.H.G., A.L. KUHN, T.R. JAC KMAN, AND A.M. BAUER. 2014. A phylogenetic analysis of the southern african gecko genus *Afroedura* Loveridge (Squamata: Gekkonidae) with the description of nine new species from Limpopo and Mpumalanga provinces of South Africa. *Zootaxa*, 3846:451–501.
- JACKSON, K., AND D.C. BLACKBURN. 2010. A survey of amphibians and reptiles at degraded sites near Pointe-Noire, Kouilou province, Republic of Congo. *Herpetological Conservation and Biology*, 5(3):414–429.
- JAN, G. 1859. Additions et rectifications aux *Plan et Prodrome de l'Iconographie descriptive des Ophidiés*. *Revue et Magasin de Zoologie Pure et Appliquée*, 2e série, 11:505–512.
- JAN, G. 1863. *Elenco Sistematico degli Ofidi Descritti Disegnati per l'Iconografia Generale*. A. Lombardi, Milano, Italy. viii + 9–143 + iii pp.
- JAN, G. 1864. *Iconographie Générale des Ophidiens. Première Famille, Les Typhlopiens*. Chez l'Auteur, Milan, Italy; J.B. Bailliére et Fils, Paris, France. 42 pp.

- JOGER, U. (1985) The African gekkonine radiation – preliminary phylogenetic results, based on quantitative immunological comparisons of serum albumins. Pages 479–494 in K.-L. Schuchmann, ed., *Proceedings of the International Symposium on African Vertebrates*. Zoologisches Forschungsinstitute und Museum Koenig, Bonn, Germany. 585 pp.
- JONGSMA, G.F.M., M.F. BAREJ, C.D. BARRAT, M. BURGER, W. CONRADIE, R. ERNST, E. GREENBAUM, M. HIRSCHFELD, A.D. LEACHÉ, J. PENNER, D.M. PORTIK, A.G. ZASSI-BOULOU, M.O. RÖDEL, AND D.C. BLACKBURN. 2018. Diversity and biogeography of frogs in the genus *Amnirana* (Anura: Ranidae) across sub-Saharan Africa. *Molecular Phylogenetics and Evolution*, 120:274–285.
- JURIEV, K.P. 1981. Albert Seba and his contribution to the development of herpetology [in Russian]. Pages 109–120 in N.B. Ananjeva, and L.J. Borkin, eds., *The Fauna and Ecology of Amphibians and Reptiles of the Palaearctic Asia. Proceedings of the Zoological Institute of the Academy of Sciences of the USSR*, 101. Akademia Nauk, Leningrad, USSR [now St. Petersburg, Russia].
- KELLY, C.M.R., N.P. BARKER, M.H. VILLET, AND D.G. BROADLEY. 2009. Phylogeny, biogeography and classification of the snake Superfamily Elapoidea: a rapid radiation in the late Eocene. *Cladistics*, 25(2009):38–63.
- KELLY, C.M.R., N.P. BARKER, M.H. VILLET, D.G. BROADLEY, AND W.R. BRANCH. 2008. The snake family Psammophiidae (Reptilia: Serpentes): phylogenetics and species delimitation in the African sand snakes (*Psammophis* Boie, 1825) and allied genera. *Molecular Phylogenetics and Evolution*, 27:1045–1060.
- KELLY, C.M.R., W.R. BRANCH, D.G. BROADLEY, N.P. BARKER, AND M.H. VILLET. 2011. Molecular systematics of the African snake family Lamprophiidae Fitzinger, 1843 (Serpentes: Elapsoidea), with particular focus on the genera *Lamprophis* Fitzinger 1843 and *Mehelya* Csiki 1903. *Molecular Phylogenetics and Evolution*, 58:415–426.
- KINDLER, C., W.R., BRANCH, M.D., HOFMEYR, J. MARAN, P. ŠIROKÝ, M. VENCES, J. HARVEY, M. VENCES, J. HARVEY, J.S. HAUSWALDT, A. SCHLEICHER, H. STICKAS, AND U. FRITZ. 2012. Molecular phylogeny of African hinge-back tortoises (*Kinixys*): implications for phylogeography and taxonomy (Testudines: Testudinidae). *Journal of Zoological Systematics and Evolutionary Research*, 50(3):192–201.
- KINDLER, C., M. MOOSIG, W.R. BRANCH, J. HARVEY, C. KEHLMAIER, Z.T. NAGY, H. PROKOP, P. ŠIROKÝ, AND U. FRITZ. 2016. Comparative phylogeographies of six species of hinged terrapins (*Pelusios* spp.) reveal discordant patterns and unexpected differentiation in the *P. castaneus*/*P. chapini* complex and *P. rhodesianus*. *Biological Journal of the Linnean Society*, 117(2):305–321.
- KING, F.W., AND R.L. BURKE. 1989. *Crocodylian, Tuatara, and Turtle Species of the World. A Taxonomic and Geographic Reference*. The Association of Systematics Collections, Washington, D.C., USA. xxii + 216 pp.
- KIPPING, J., V. CLAUSNITZER, S.R.F.F. ELIZALDE, AND K.-D.B. DIJKSTRA. 2017. The dragonflies and damselfies (Odonata) of Angola. *African Invertebrates*, 58(1):65–91.
- KLAUSEWITZ, W. 1957. Eidonomische Untersuchungen über die Rassenkreise *Agama cyanogaster* und *Agama atricollis*. 2. Die Unterarten von *Agama atricollis*. *Senckenbergiana Biologica*, 38:157–174.
- KLAVER, C., AND W. BÖHME. 1997. Chamaeleonidae. *Das Tierreich*, 112. Walter de Gruyter, Berlin, Germany. xv + 85 pp.
- KLUGE, A.G. 1969. The evolution and geographical origin of the New World *Hemidactylus mabouia-brookii* complex (Gekkonidae, Sauria). *Miscellaneous Publications of the Museum of Zoology, University of Michigan*, 138:1–78.
- KLUGE, A.G., AND R.A. NUSSBAUM. 1995. A review of African–Madagascan gekkonid lizard phylogeny and biogeography (Squamata). *Miscellaneous Publications of the Museum of Zoology, University of Michigan*, 183:1–20.
- KOBEL, H.R. 1981. Evolutionary trends in *Xenopus* (Anura Pipidae). *Monitore Zoologico Italiano, Supplemento*, 15:119–131.
- KÖHLER, J. 2009. The identity of *Hylambates rufus aubyioides* Andersson, 1907 (Anura: Arthroleptidae) from Cameroon. *Copeia*, 2009:57–61.
- KÖHLER, J., K. SCHEELKE, S. SCHICK M. VEITH, AND S. LÖTTERS. 2005. Contribution to the taxonomy of hyperoliid frogs (Amphibia: Anura: Hyperoliidae): advertisement calls of twelve species from east and central Africa. *African Zoology*, 40:127–142.

- KOLBY, J.E., S.D. RAMIREZ, L. BERGER, K.L. RICHARDS-HRDLICK, M. JOCQUE, AND L.F. SKERRATT. 2015. Terrestrial dispersal and potential environmental transmission of the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*). *PLoS ONE*, 10(4):e0125386. DOI:10.1371/journal.pone.0125386.
- KRAUS, F. 2009. *Alien Reptiles and Amphibians. A Scientific Compendium and Analysis*. Springer, Dordrecht, The Netherlands. xii + 561 pp., CD-ROM.
- KUHN, A. 2016. Systematics of the Namib Day Geckos (Squamata: Gekkonidae: *Rhoptropus*). Unpublished M.S. thesis, Villanova University. Villanova, Pennsylvania, USA
- KUZMIN, S.L. 2013. *The Amphibians of the Former Soviet Union*. Pensoft Publishers, Sofia, Bulgaria. 384 pp., DVD.
- LACEPÈDE, B.G.E. 1788. *Histoire Naturelle des Quadrupèdes Ovipares et de Serpens*. Tome 1. Imprimerie du Roi, Hôtel de Thou, Paris, France. xvii + [1] + 651 pp., 2 folding charts, 41 pls.
- LACEPÈDE, B.G.E. 1789. *Histoire Naturelle des Quadrupèdes Ovipares et de Serpens*. Tome 2. Imprimerie du Roi, Hôtel de Thou, Paris, France. [1], [1], 8, 5-19, [1], 144, 527 pp, 22 pls.
- LAMB, T., AND A.M. BAUER. 2000. Relationships of the *Pachydactylus rugosus* group of geckos (Reptilia: Squamata: Gekkonidae). *African Zoology*, 35:55–67.
- LAMB, T., AND A.M. BAUER. 2002. Phylogenetic relationships of the large-bodied members of the African lizard genus *Pachydactylus* (Reptilia: Gekkonidae). *Copeia*, 2002:586–596.
- LAMB, T., AND A.M. BAUER. 2003. *Merolus* revisited: Complementary systematic inference from additional mitochondrial genes and complete taxon sampling of southern Africa's desert lizards. *Molecular Phylogenetics and Evolution*, 29:360–364.
- LAMB, T., AND A.M. BAUER. 2013. To be or not to be *Angolosaurus*: a multilocus perspective on the phylogenetic position of Africa's desert plated lizard (Gerrhosauridae). *Zoologica Scripta*, 42(4):381–388.
- LAMB, T., S. BISWAS, AND A.M. BAUER. 2010 A phylogenetic reassessment of African fossorial skinks in the subfamily Acontinae (Squamata: Scincidae): evidence for parallelism and polyphyly. *Zootaxa*, 2657: 33–46.
- LAMB, T., A.M. MEEKER, A.M. BAUER, AND W.R. BRANCH. 2003. On the systematic status of the desert plated lizard (*Angolosaurus skoogi*): phylogenetic inference from DNA sequence analysis of the African Gerrhosauridae. *Biological Journal of the Linnean Society*, 78:253–261.
- LAMBIRIS, A.J.L. 1988. A review of the amphibians of Natal. *Lammergeyer*, 39:1–210.
- LAMOTTE, M. 1967. Le problème des *Ptychadena* (Fam. Ranidae) du groupe *mascareniensis* dans l'Ouest African. *Bulletin du Museum National d'Histoire Naturelle, Paris*, 2^e série, 39:647–656.
- LANG, M. 1990. Annotated catalogue of the type-specimens from the herpetological collection of the Royal Belgian Institute of Natural Sciences, Brussels. *Documents de Travail. Institut Royal des Sciences Naturelles de Belgique*, 59:1–36.
- LANZA, B., AND D.G. BROADLEY. 2014. A review of the genus *Gonionotophis* in north-eastern Africa (Squamata: Lamprophiidae). *Acta Herpetologica*, 9(1):89–97.
- LARGEN, M.J. 1977. The status of the genus *Leptopelis* (Amphibia Anura Hyperoliidae) in Ethiopia, including descriptions of two new species. *Monitore Zoologico Italiano, Nuova Serie, Supplemento*, 9:85–136.
- LARGEN, M.J. 2000. Another new species of *Ptychadena* Boulenger 1917 from Ethiopia (Amphibia Anura Ranidae). *Tropical Zoology*, 13(1):171–178.
- LARGEN, M.J. 2001. Catalogue of the amphibians of Ethiopia, including a key for their identification. *Tropical Zoology*, 14:307–402.
- LARGEN M. J., AND A.R. PARKER. 2004. *Catalogue of the Spirit-Preserved Herpetological Collections in the Liverpool Museum*. National Museums Liverpool, Liverpool, United Kingdom. [1] + 47 pp.
- LAURENT, R.F. 1941. Les *Megalixalus* (Batraciens) du Musée du Congo. *Revue de Zoologie et de Botanique Africaines*, 35:119–132.
- LAURENT, R.F. 1943a. Contribution a l'étude des genres *Megalixalus* et *Hyperolius*. *Bulletin du Musée Royal d'Histoire Naturelle de Belgique*, 19:1–20.
- LAURENT, R.F. 1943b. Les *Hyperolius* (Batraciens) du Musée du Congo. *Annales du Musée Royal du Congo Belge, Tervuren (Belgique)*, C. Zoologie. Série I, 4(2):61–140.
- LAURENT, R.F. 1947. Notes sur quelques reptiles appartenant a la collection du Musée Royal d'Histoire Naturelle de Belgique. *Bulletin du Musée Royal d'Histoire Naturelle de Belgique*, 23(16):1–12.

- LAURENT, R.F. 1950a. Reptiles et batraciens de la région de Dundo (Angola du Nord-Est) (Première note). *Publicações Culturais da Companhia de Diamantes de Angola*, 17 pp.
- LAURENT, R.F. 1950b. Revision du genre *Atractaspis* A. Smith. *Memoires Institut Royal des Sciences Naturelles de Belgique*, 2(38):1–49.
- LAURENT, R.F. 1951. Remarques à propos des genres *Dipsadoboa* Günther et *Crotaphopeltis* Fitzinger. *Revue de Zoologie et de Botanique Africaines*, 44:210–212.
- LAURENT, R.F. 1952 “1951.” Aperçu des formes actuellement reconnaissables dans la superespece *Hyperolius marmoratus*. *Annales de la Société Royale Zoologique de Belgique*, 82:379–397.
- LAURENT, R.F. 1954a. Reptiles et batraciens de la région de Dundo (Angola) (Deuxième note). *Publicações Culturais da Companhia de Diamantes de Angola*, 23:35–84.
- LAURENT, R.F. 1954b. Etude de quelques espèces méconnues du genre *Ptychadena*. *Annales du Musée Royal du Congo Belge, Tervuren (Belgique)*, série in-8°, *Sciences Zoologiques*, 34:1–34., pls. 1–5
- LAURENT, R.F. 1954c. Remarques sur le genre *Schoutedenella* Witte. *Annales du Musée Royal du Congo Belge Tervuren (Belgique)*, série in-4°, *Sciences Zoologiques*, 4(1): 34–40.
- LAURENT, R.F. 1955. Diagnoses préliminaires de quelques serpents venimeux. *Reveu de Zoologie et de Botanique Africaines*, 51(1–2):127–139.
- LAURENT R.F. 1956. Contribution à l’herpétologie de la région des grands lacs de l’Afrique centrale. I. Generalites, II. Cheloniens, III. Ophidiens. *Annales du Musée Royal du Congo Belge, Tervuren (Belgique)*, série in-8°, *Sciences Zoologiques*, 48:1–390, pls. 1–29.
- LAURENT, R.F. 1957. Notes sur les Hyperoliidae. *Revue de Zoologie et de Botanique Africaines*, 56:274–282.
- LAURENT, R.F. 1960. Notes complémentaires sur les chéloniens et les ophidiens du Congo oriental. *Annales du Musée Royal du Congo Belge, Tervuren (Belgique)*, série in-8°, *Sciences Zoologiques*, 84:1–86.
- LAURENT, R.F. 1961. Note sur les *Hyperolius* et quelques *Afraxalus* (Salientia) du Musée de Berlin. *Revue de Zoologie et de Botanique Africaines*, 64 (1–2):65–96.
- LAURENT, R.F. 1964a. Reptiles et amphibiens de l’Angola (Troisième contribution). *Publicações Culturais. Companhia de Diamantes de Angola*, 67:1–165.
- LAURENT, R.F. 1964b. A new subspecies of *Varanus exanthematicus* (Sauria, Varanidae). *Breviora*, 199:1–9.
- LAURENT, R.F. 1964c. A revision of the *punctatus* group of african *Typhlops* (Reptilia: Serpentes). *Bulletin of the Museum of Comparative Zoology*, 130(6):389–444.
- LAURENT, R.F. 1965. A contribution to the knowledge of the genus *Pelusios* (Wagler). *Annales du Musée Royal de l’Afrique Centrale, Tervuren, Belgique*, series in-8°, *Sciences Zoologiques*, 135:i–vi + 1–33, pls. 1–3.
- LAURENT, R.F. 1968. A re-examination of the snake genus *Lycophidion* Duméril and Bibron. *Bulletin of the Museum of Comparative Zoology*, 136(12):461–482.
- LAURENT, R.F. 1972. Tentative revision of the genus *Hemisis* Günther. *Annales du Musée Royal de l’Afrique Centrale, Tervuren, Belgique*, series in-8°, *Sciences Zoologiques*, 194:1–67.
- LAURENT, R.F. 1982. Le genre *Afraxalus* Laurent (Hyperoliidae) en Afrique centrale. *Annales du Musée Royal de l’Afrique Centrale, Tervuren, Belgique*, series in-8°, *Sciences Zoologiques*, 235:i–vi + 1–58.
- LAURENTI, J.N. 1768. *Specimen Medicum, Exhibens Synopsin Reptilium Emendatam cum Experimentis circa Venena et Antidota Reptilium Austracorum, quod Autoritate et Consensu*. Joan. Thomæ nob. De Trattner, Viennæ [Vienna], Austria. 214 + [3] pp., 5 pls.
- LE, M., C.J. RAXWORTHY, W.P. MCCORD, AND L. MERTZ. 2006. A molecular phylogeny of tortoises (Testudines: Testudinidae) based on mitochondrial and nuclear genes. *Molecular Phylogenetics and Evolution*, 40:517–531.
- LEACH, W.E. 1818. Appendix. No. IV. A general notice of the animals taken by Mr. John Cranch, during the expedition to explore the source of the River Zaire. Pages 407–419 in J.K. Tuckey, *Narrative of an Expedition to Explore the River Zaire, usually called the Congo, in South Africa, in 1816, under the direction of Captain J. K. Tuckey, R.N., to which is Added, the Journal of Professor Smith; Some General Observations on the Country and its Inhabitants; and an Appendix: Containing the Natural History of that Part of the Kingdom of Congo through which the Zaire Flows*. John Murray, London, United Kingdom. [4] + [ii] + [i] + lxxxii + 498 pp., folding map, 12 pls.
- LEACH, W.E. 1819. Appendix. No. IV. Pages 493–496 in T.E. Bowditch, *Mission from Cape Coast Castle to*

- Ashantee, with a Statistical Account of that Kingdom, Geographical Notices of other Parts of the Interior of Africa.* John Murray, London, United Kingdom. viii + [2] + 512 pp., 16 pls., 1 folding map.
- LEACHÉ, A.D., R.A. CHONG, T.J. PAPPENFUS, P. WAGNER, W. BÖHME, A. SCHMIDZ, M.-O., RÖDEL, A. SCHMITZ, M. LEBRETON, I. INEICH, L. CHIRIO, A.M. BAUER, E.A. ENIANG, AND S. BABA EL DIN. 2009. Phylogeny of the genus *Agama* based on mitochondrial DNA sequence data. *Bonner Zoologische Beiträge*, 56(4):273–278.
- LEBRETON, M. 2010. *Letheobia praeularis*. The IUCN Red List of Threatened Species 2010: e.T178700A7598744. <<http://dx.doi.org/10.2305/IUCN.UK.20104.RLTS.T178700A7598744.en>>. Downloaded on 10 February 2016.
- LENK, P., H.-W., HERRMANN, U. JOGER, AND M. WINK. 1999. Phylogeny and taxonomic subdivision of *Bitis* (Reptilia: Viperidae) based on molecular evidence. *Kaupia*, 8:31–38.
- LENK, P., S. KALYABINA, M. WINK, AND U. JOGER. 2001. Evolutionary relationships among the true vipers (Reptilia: Viperidae) inferred from mitochondrial DND sequences. *Molecular Phylogenetics and Evolution*, 19(1):94–104.
- LICHTENSTEIN, M.H.C. 1823. *Verzeichniss der Doubletten des zoologischen Museums der Königl. Universität zu Berlin nebst Beschreibung vieler bisher unbekannter Arten von Säugethieren, Vögeln, Amphibien und Fischen.* T. Trautwein, Berlin, Germany. x + 118 pp., 1 pl.
- LICHTENSTEIN, M.H.C., AND E. VON MARTENS. 1856. *Nomenclator Reptilium et Amphibiorum Musei Zoologici Berolinensis.* Königlich Akademie der Wissenschaften, Berlin. iv + 48 pp.
- LINDER, H. P., H.M. DE KLERK, J. BORN, N.D. BURGESS, J. FJELDSÅ, AND C. RAHBEK. 2012. The partitioning of Africa: statistically defined biogeographical regions in sub-Saharan Africa. *Journal of Biogeography*, 39:1189–1205.
- LINNAEUS, C. 1758. *Systema Naturæ per Regna Tria Naturæ, Secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis.* Editio decima. Tomus I. Laurenti Salvii [Lars Salvius], Holmiae [Stockholm], Sweden. [4] + 823 + [1] pp.
- LINNAEUS, C. 1766. *Systema Naturæ per Regna Tria Naturæ, Secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis.* Tomus I, Pars I. Editio duodecima, reformata. Laurentii Salvii [Lars Salvius], Holmiae [Stockholm], Sweden. [10] + 11-532.
- LIPS, K.R., J. DIFFENDORFER, J.R. MENDELSON, AND M.W. SEARS. 2008. Riding the wave: reconciling the roles of disease and climate change in amphibian declines. *PLoS Biology*, 6:e72. DOI: 10.1371/journal.pbio.0060072
- LOUMONT, C. 1983. Deux espèces nouvelles de *Xenopus* du Cameroun (Amphibia, Pipidae). *Revue Suisse de Zoologie*, 90:169–177.
- LOUMONT, C. 1984. Current distribution of the genus *Xenopus* in Africa and future prospects. *Revue Suisse de Zoologie*, 91:725–746.
- LOVERIDGE, A. 1932a. New reptiles and amphibians from Tanganyika territory and Kenya colony. *Bulletin of the Museum of Comparative Zoölogy*, 72:375–387.
- LOVERIDGE, A. 1932b. New opisthoglyphous snakes of the genera *Crotaphopeltis* and *Trimerorhinus* from Angola and Kenya colony. *Proceedings of the Biological Society of Washington*, 45:83–86.
- LOVERIDGE, A. 1933. Reports on the scientific results of an expedition to the southwestern highlands of Tanganyika territory. VII. Herpetology. *Bulletin of the Museum of Comparative Zoölogy*, 74:197–416, pls. 1–3.
- LOVERIDGE, A. 1936a. African reptiles and amphibians in the Field Museum of Natural History. *Zoological Series, Field Museum of Natural History*, 22(1):1–122.
- LOVERIDGE, A. 1936b. Scientific results of an expedition to rain forest regions in eastern Africa. VII. Amphibians. *Bulletin of the Musuem of Comparative Zoölogy*, 79(7):369–430, pls. 1–3.
- LOVERIDGE, A. 1939. Revision of the African snakes of the genera *Mehelya* and *Gonionotophis*. *Bulletin of the Museum of Comparative Zoölogy*, 86(3):131–162.
- LOVERIDGE, A. 1940. Revision of the african snakes of the genera *Dromophis* and *Psammophis*. *Bulletin of the Museum of Comparative Zoölogy*, 87(1):1–69.
- LOVERIDGE, A. 1941a. Report on the Smithsonian-Firestone Expedition's collection of reptiles and amphibians from Liberia. *Proceedings of the United States National Museum*, 91:113–139.

- LOVERIDGE, A. 1941b. Revision of the African terrapins of the family Pelomedusidae. *Bulletin of the Museum of Comparative Zoölogy*, 88(6):467–524.
- LOVERIDGE, A. 1941c. Revision of the african lizards of the family Amphisbaenidae. *Bulletin of the Museum of Comparative Zoölogy*, 87(5):353–451.
- LOVERIDGE, A. 1942. Revision of the African lizards of the family Gerrhosauridae. *Bulletin of the Museum of Comparative Zoölogy*, 89(11):483–543.
- LOVERIDGE, A. 1944a. New geckos of the genera *Afroedura*, new genus, and *Pachydactylus* from Angola. *American Museum Novitates*, 1254:1–4.
- LOVERIDGE, A. 1944b. Revision of the African lizards of the family Cordylidae. *Bulletin of the Museum of Comparative Zoölogy* 95(1):1–118, pls. 1–12.
- LOVERIDGE, A. 1944c. Further revisions of african snake genera. *Bulletin of the Museum of Comparative Zoölogy*, 95(2):119–247.
- LOVERIDGE, A. 1947. Revision of the African lizards of the family Gekkonidae. *Bulletin of the Museum of Comparative Zoölogy*, 98:1–469, pls. 1–7.
- LOVERIDGE, A. 1950. History and habits of the East African bullfrog. *Journal of the East Africa Natural History Society*, 19:253–255.
- LOVERIDGE, A. 1951. Synopsis of the African green snakes (*Philothamnus* inc. *Chlorophis*), with the description of a new form. *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique*, 27(37):1–12.
- LOVERIDGE, A. 1953a. Zoological results of a fifth expedition to East Africa. IV. Amphibians from Nyasaland and Tete. *Bulletin of the Museum of Comparative Zoology*, 110(4):323–407, pls. 1–4.
- LOVERIDGE, A. 1953b. Zoological results of a fifth expedition to East Africa. III. Reptiles from Nyasaland and Tete. *Bulletin of the Museum of Comparative Zoology*, 110(3):141–322, pls. 1–5.
- LOVERIDGE, A. 1957. Checklist of the reptiles and amphibians of East Africa (Uganda, Kenya, Tanganyika, Zanzibar). *Bulletin of the Museum of Comparative Zoology*, 117:151–362, i–xxxvi.
- LOVERIDGE, A. 1958. Revision of five African snake genera. *Bulletin of the Museum of Comparative Zoology*, 119:1–198.
- LOVERIDGE, A., AND E.E. WILLIAMS. 1957. Revision of the african tortoises and turtles of the suborder Cryptodira. *Bulletin of the Museum of Comparative Zoology*, 115:163–557, pls. 1–18.
- LUISELLI, L., AND T. DIAGNE. 2014. *Kinixys erosa* (Schweigger 1812) – Forest Hinge-back Tortoise, Serrated Hinged Tortoise. Pages 084.1–084.13 in A.G.J. Rhodin, P.C.H. Pritchard, P.P. van Dijk, R.A. Saumure, K.A. Buhlmann, J.B. Iverson, and R.A. Mittermeier, eds., *Conservation Biology of Freshwater Turtles and Tortoises*. Chelonian Research Monographs 5.
- MACHADO, M. 1979. Pitão africano. *Diana*, (2)1:10–13, 43, 45–50.
- MAHNERT, V. 1976. Catalogue des types de poissons, amphibiens et reptiles du Muséum d'Histoire naturelle de Genève. *Revue Suisse de Zoologie*, 83(2):471–496.
- MAKOKHA, J.S., A.M., BAUER, W. MAYER, AND C.A. MATTHEE. 2007. Nuclear and mtDNA-based phylogeny of southern African sand lizards, *Pedioplanis* (Sauria: Lacertidae). *Molecular Phylogenetics and Evolution*, 44(2):622–633.
- MALNATE, E.V. 1971. A catalog of primary types in the herpetological collections of the Academy of Natural Sciences, Philadelphia (ANSP). *Proceedings of the Academy of Natural Sciences of Philadelphia*, 123(9):345–375.
- MANAÇAS, S. 1957 “1955.” Saurios e ofídios da Guiné Portuguesa. *Anais da Junta de Investigações do Ultramar (Estudos de Zoologia)*, 10:187–212.
- MANAÇAS, S. 1958. Anfíbios e répteis das ilhas de S. Tomé, do Príncipe e do ilhéu das Rolas. *Conferência Internacional dos Africanistas Ocidentais*, 4:179–192.
- MANAÇAS, S. 1963. Saurios de Angola. *Memórias da Junta de Investigações do Ultramar*, 43(2):223–240.
- MANAÇAS, S. 1973. Alguns ofídeos de Angola. *Memórias da Junta de Investigação do Ultramar*, 58(2): 187–200.
- MANAÇAS, S. 1982. Ofídeos venenosos da Guiné, S. Tomé, Angola e Moçambique. *Garcia de Orta: Série de Zoologia*, 10(1/2):13–46.
- MARX, H. 1956. A new lacertid lizard from Angola. *Fieldiana, Zoology*, 39(2):5–9.
- MARX, H. 1959. Catalogue of type sepcimens of reptiles and amphibians in Chicago Natural History Muse-

- um. *Fieldiana, Zoology*, 36(4):409–496.
- MARX, H. 1976. Supplementary catalogue of type specimens of reptiles and amphibians in Field Museum of Natural History. *Fieldiana, Zoology*, 69(2):33–94.
- MASHININI, P.L., AND L.M. MAHLANGU. 2013. An annotated catalogue of the types of gekkonid lizards (Reptilia: Squamata: Gekkonidae) in the herpetology collection of the Ditsong National Museum of Natural History, South Africa. *Annals of the Ditsong National Museum of Natural History*, 3:165–181.
- MASHININI, P.L. AND L.M. MAHLANGU. 2014. An annotated catalogue of the types of chelonians (Reptilia: Testudines) in the herpetology collection of the Ditsong National Museum of Natural History, South Africa. *Annals of the Ditsong National Museum of Natural History*, 4:181–186.
- MAUSFELD-LAFDHIYA, P., A. SCHMITZ, I. INEICH, AND L. CHIRIO. 2004. Genetic variation in two african *Euprepis* species (Reptilia, Scincidae), based on maximum-likelihood and bayesian analyses: taxonomic and biogeographic conclusions. *Bonner zoologische Beiträge*, 52(2004):159–177.
- MAXSON, L.R. 1981. Albumin evolution and its phylogenetic implications in African toads of the genus *Bufo*. *Herpetologica*, 37:96–104.
- MCAILEY, L.R., R.E. WILLIS, D.A. RAY, P.S. WHITE, C.A. BROCHU, AND L.D. DENSMORE III. 2006. Are crocodyles really monophyletic? Evidence for subdivisions from sequence and morphological data. *Molecular Phylogenetics and Evolution*, 39:16–32.
- MCCOY, C.J., AND N.D. RICHMOND. 1966. Herpetological type-specimens in Carnegie Museum. *Annals of Carnegie Museum*, 38(10):233–264.
- MCDIARMID, R.W., J.A. CAMPBELL, AND T. TOURÉ. 1999. *Snake Species of the World. A Taxonomic and Geographic Reference*. The Herpetologists' League, Washington, D.C., USA. xi + 511 pp.
- MCLACHLAN, G. R., AND J. M. SPENCE. 1967. A new species of *Pachydactylus* (*Pachydactylus oreophilus* sp. nov.) from Sesfontein, South West Africa. *Cimbebasia*, 21:3–8.
- MEASEY, G.J., AND A. CHANNING. 2003. Phylogeography of the genus *Xenopus* in southern Africa. *Amphibia-Reptilia*, 24:321–330.
- MEDINA, M.F., A.M. BAUER, W.R. BRANCH, A. SCHMITZ, W. CONRADIE, Z.T. NAGY, T.J. HIBBITTS, R. ERNST, D.M. PORTIK, S.V. NIELSEN, T.J. COLSTON, C. KUSAMBA, M. BEHANGANA, M.-O. RÖDEL, AND E. GREENBAUM. 2016. Molecular phylogeny of *Panaspis* and *Afroablepharus* skinks (Squamata: Scincidae) in the savannas of sub-Saharan Africa. *Molecular Phylogenetics and Evolution*, 100:409–423.
- MEEK, S.E. 1897. List of fishes and reptiles obtained by Field Columbian Museum East African Expedition to Somali-land in 1896. *Field Museum of Natural History Publication, Zoological Series*, 1:163–184.
- MENDES, L.F., A. BIVAR DE SOUSA, AND R. FIGUEIRA. 2013. *Borboletas diurnas de Angola/Butterflies of Angola. Lepidoptera/Papilionoidea*. Vol.1. *Herperiidae.Papilionidae*. Instituto de Investigação Científica Tropical/CIBIO, Lisboa, Portugal and Porto, Portugal. 288 pp.
- MENEGON, M., AND S. SPAWLS. 2011. *Trachylepis bayonii*. The IUCN Red List of Threatened Species 2011: e.T178606A7579955. <<http://dx.doi.org/10.2305/IUCN.UK.2011-1.RLTS.T178606A7579955.en>>. Downloaded on 23 February 2017.
- MENZIES, J.I. 1966. The snakes of Sierra Leone. *Copeia*, 1966(2):169–179.
- MERREM, B. 1820. *Versuch eines Systems der Amphibien — Tentamen Systematis Amphibiorum*. Johann Christian Krieger, Marburg, Germany. Xv + 191 pp. [German], xv + 191 pp. [Latin], 1 pl.
- MERTENS, R. 1922. Verzeichniss der Typen in der herpetologischen Sammlung des Senckenbergischen Museums. *Senckenbergiana*, 4(6):162–183.
- MERTENS, R. 1926. Zur Kenntnis der Herpetofauna von Angola. *Senckenbergiana*, 8:137–155.
- MERTENS, R. 1936. Eine neue Natter der Gattung *Helicops* aus Inner-Afrika. *Zoologischer Anzeiger*, 114: 284–285.
- MERTENS, R. 1937a. Reptilien und Amphibien aus dem südlichen Inner-Afrika. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 435:1–23.
- MERTENS, R. 1937b. Bemerkungen über die Rassen von *Pelomedusa subrufa* (Lacépède). *Zoologischer Anzeiger*, 117:139–142.
- MERTENS, R. 1938a. Amphibien und Reptilien aus Angola gesammelt von W. Schack. *Senckenbergiana*, 20(6):425–443.
- MERTENS, R. 1938b. Herpetologische Ergebnisse einer Reise nach Kamerun. *Abhandlungen der Senckenber-*

- gischen Naturforschenden Gesellschaft, 442:1–52, pls. 1–10.
- MERTENS, R. 1942a. Die Familie der Warane (Varanidae), Zweiter Teil: Der Schädel. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 465:117–234.
- MERTENS, R. 1942b. Die Familie der Warane (Varanidae), Erster Teil: Allgemeines. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 462:1–116.
- MERTENS, R. 1942c. Die Familie der Warane (Varanidae), Dritter Teil: Taxonomie. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 466, 235–391.
- MERTENS, R. 1954. Neue Eidechsen aus Südwest-Afrika. *Senckenbergiana*, 34:175–186.
- MERTENS, R. 1955. Die Amphibien und Reptilien Südwestafrikas. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 490:1–172, pls. 1–24.
- MERTENS, R. 1958. *Bitis heraldica*, eine oft verkannte Otter aus Angola. *Senckenbergiana Biologica*, 39(3/4):145–148.
- MERTENS, R. 1963. Die Rassengliederung der afrikanischen Wassernatter *Limnophis bicolor*. *Senckenbergiana Biologica*, 44(6):437–439.
- MERTENS, R. 1967. Die herpetologische Sektion des Natur-Museums und Forschungs-Institutes Senckenberg in Frankfurt a. M. nebst einem Verzeichnis ihrer Typen. 1. *Senckenbergiana Biologica*, 48A:1–106.
- MERTENS, R. 1971. Die Herpetofauna Südwest-Afrikas. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft, Frankfurt am Main*, 529:1–110.
- METALLINO, M., J.L. WEINELL, B.R. KARIN, W. CONRADIE, P. WAGNER, A. SCHMITZ, T.R. JACKMAN, AND A.M. BAUER. 2016. A single origin of extreme matrotrophy in African mabuyine skinks. *Biology Letters*, 12:20160430 [5pp.]. DOI: 10.1098/rsbl.2016.0430.
- MIFSUD, D.A., AND M.M. STAPLETON. 2014. *Kinixys Conservation Blueprint: A Comprehensive Assessment to Ensure the Future of the Genus*. Herpetological Resource and Management Technical Publication. Herpetological Resource and Management, LLC, Ann Arbor, Michigan, USA. 134 pp.
- MILLS, M.S.L. 2010. Angola's central scarp forests: patterns of bird diversity and conservation threats. *Biodiversity and Conservation*, 19(7):1883–1903.
- MILLS, M.S.L., AND W.R.J. DEAN. 2007. Notes on Angolan birds: new country records, range extensions and taxonomic questions. *Ostrich*, 78:55–63.
- MILLS, M.S.L. AND M. MELO. 2013. *The Checklist of the Birds of Angola*. Associação Angolana para Aves e Natureza and Birds Angola, Luanda, Angola. 75 pp.
- MILLS, M.S.L., F. OLMOS, M. MELO, AND W. RICHARD, AND J. DEAN. 2011. Mount Moco: its importance to the conservation of Swierstra's Francolin *Pternistis swierstrai* and the afromontane avifauna of Angola. *Bird Conservation International*, 21(2):119–133.
- MITTLEMAN, M.B. 1952. A generic synopsis of the lizards of the subfamily Lygosominae. *Smithsonian Miscellaneous Collections*, 117:1–35.
- MOCQUARD, M. F. 1889. Sur une collection de reptiles du Congo. *Bulletin de la Société Philomathique de Paris*, série 8, 1:145–148, pl. 2.
- MOCQUARD, M.F. 1897a. Note préliminaire sur une collection de reptiles recueillie par M. Haug à Lamaréné. *Bulletin du Muséum d'Histoire Naturelle, Paris*, 3:54–55.
- MOCQUARD, M.F. 1897b. Sur une collection de reptiles recueillis par M. Haug, à Lambaéné. *Bulletin de la Société Philomathique de Paris*, série 8, 9:5–20.
- MOCQUARD, F. 1903. Description d'espèces nouvelles de la collection du Muséum. *Bulletin du Museum National d'Histoire Naturelle, Paris*, 9:214.
- MOISE, A.F, AND D.A. HUDSON. 2008. Probabilistic predictions of climate change for Australia and southern Africa using the reliability ensemble average of IPCC CMIP3 model simulations. *Journal of Geophysical Research*, 113:1e26.
- MONARD, A. 1931. Mission scientifique suisse dans l'Angola. Résultats scientifiques. Reptiles. *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, 33:89–111.
- MONARD, A. 1932. Deuxième mission scientifique suisse dans l'Angola: sur l'existence en Angola d'un grand reptile encore inconnu. *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, 57:67–71.
- MONARD, A. 1937a. Contribution à la batrachologie d'Angola. *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, 62:1–59.

- MONARD, A. 1937b. Contribution à l'herpétologie d'Angola. *Arquivos do Museu Bocage*, 8:19–154.
- MONARD, A. 1938. Contribution à la batrachologie d'Angola. *Arquivos do Museu Bocage*, 9:52–120.
- MOREAU DE JONNÈS, A. 1818. Monographie du mabouia des murailles, ou *Gecko Mabouia* des Antilles. *Bulletin des Sciences par la Société Philomatique de Paris*, 1818:138–139.
- MÜLLER, L. 1910. Beiträge zur Herpetologie Kameruns. *Abhandlungen der Mathematisch-Physikalischen Klasse der Königlich Bayerischen Akademie der Wissenschaften*, 24:543–626, 1 pl.
- MÜLLER, L. 1911. Beiträge zur Herpetologie Kameruns. *Zoologischer Anzeiger*, 38:357–360.
- MÜLLER, L. 1911. Zwei neue Schlangen aus dem Katangadistrikt, Kongostaat. *Zoologischer Anzeiger*, 38:357–360.
- MUNGUÍA, M., C. RAHBEK, J.A.F. DINIZ-FILHO, T.F.L.B. RANGEL, AND M.B. ARAÚJO. 2012. Equilibrium of global amphibian species distributions with climate. *PLoS ONE*, 7(4):e34420. DOI: 10.1371/journal.pone.0034420.
- NAGY, Z.T., N. VIDAL, M. VENCES, W.R. BRANCH, O.S.G. PAUWELS, M. WINK, AND U. JOGER. 2005. Molecular systematics of African Colubroidea (Squamata: Serpentes). Pages 221–228 in B.A. Huber, B.J. Sinclair, and K.-H. Lampe, eds., *African Biodiversity: Molecules, Organisms, Ecosystem. Proceedings of the 5th International Symposium on Tropical Biology*. Springer Science + Business Media, Inc., New York, USA. xx + 443 pp.
- NANCE, H.A. 2007. Cranial osteology of the African gerrhosaurid *Angolosaurus skoogi* (Squamata; Gerrhosauridae). *African Journal of Herpetology*, 56(1):39–75.
- NIEDEN, F. 1908. Über einige westafrikanische Frösche. *Zoologischer Anzeiger*, 32:651–661.
- NIELSEN, S.V., AND T.J. COLSTON. 2014. The phylogenetic position of Ethiopia's sole endemic and biogeographically enigmatic cordylid lizard, *Cordylus rivae* (Squamata: Cordylidae), and a discussion of its conservation status. *African Journal of Herpetology*, 63(2):166–176.
- NILL, T. 1993. Die Schlangen der Insel São Tomé (Golf von Guinea). *Faunistische Abhandlungen, Staatliches Museum für Tierkunde Dresden*, 19:71–73.
- NOBLE, G.K. 1923. Contributions to the herpetology of the Belgian Congo based on the collection of the American Museum Congo Expedition, 1909–1915. Part III. Amphibia. *Bulletin of the American Museum of Natural History*, 49:147–347, pls. 23–42.
- NOWAK-KEMP, M., AND U. FRITZ. 2010. Chelonian type specimens at the Oxford University Museum. *Zootaxa*, 2604:1–19.
- OHLER, A., AND A. DUBOIS. 2016. The identity of the South African toad *Sclerophrys capensis* Tschudi, 1838 (Amphibia, Anura). *Peer J*, 4:e1553. DOI: 10.7717/peerj.1553.
- OHLER, A., AND M. KAZADI. 1990. "1989." Description d'une nouvelle espèce du genre *Aubria* Boulenger, 1917 (Amphibiens, Anoures) et redescription du type d'*Aubria subsigillata* (A. Duméril, 1856). *Alytes*, 8:25–40.
- OLIVEIRA, P.R.S. 2017. *Serpentes em Angola – Uma Visão Toxinológica e Clínica dos Envenenamentos*. Glaci, Lisboa, Portugal. 160 pp.
- OLIVEIRA, P.S., M.T. ROCHA, A.G. CASTRO, I.R. BETANCOURT, F.H. WEN, A.P. NETO, M.L. BASTOS, D.V. TAMBOURGI, AND S.S. SANT'ANNA. 2016. New records of Gaboon viper (*Bitis gabonica*) in Angola. *The Herpetological Bulletin*, 136:42–43.
- OLSON, D.M., E. DINERSTEIN, E.D. WIKRAMANAYAKE, N.D. BURGESS, G.V.N. POWELL, E.C. UNDERWOOD, J.A. D'AMICO, I. ITOUA, H.E. STRAND, J.C. MORRISON, C.J. LOUCKS, T.F. ALLNUTT, T.H. RICKETTS, Y. KURA, J.F. LAMOREUX, W.W. WETTENGEL, P. HEDAO, P., AND K.R. KASSEM. 2001. Terrestrial ecoregions of the world: a new map of life on Earth. *Bioscience*, 51(11):933–938.
- OLSON, D.H., D.M. AANENSEN, K.L. RONNENBERG, C.L. POWELL, S.F. WALKER, J. BIELBY, T.W. GARNER, G. WEAVER, BD MAPPING GROUP, AND M.C. FISCHER. 2013. Mapping the global emergence of *Batrachochytrium dendrobatidis*, the amphibian chytrid fungus. *PLoS ONE*, 8(2):e56802. DOI: 10.1371/journal.pone.0056802.
- ONADEKO, A.B., AND M.-O. RÖDEL. 2009. Anuran surveys in south-western Nigeria. *Salamandra*, 45:1–14.
- ONDERSTAAL, D. 1984. Descriptions of two new subspecies of *Afroedura pondolia* (Hewitt) and a discussion of species groups within the genus (Reptilia: Gekkonidae). *Annals of the Transvaal Museum*, 33:497–509.

- ORTIZ, J.C. 1989. Catalogue des types du Musée d'histoire naturelle de Neuchâtel. III, Sauriens. *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, 122:47–64.
- PARKER, H.W. 1934. *A Monograph of the Frogs of the Family Microhylidae*. The Trustees of the British Museum, London, United Kingdom. viii + 208 pp.
- PARKER, H.W. 1936. Dr. Karl Jordan's expedition to South-West Africa and Angola: herpetological collection. *Novitates Zoologicae*, 40:115–146.
- PARKER, H.W. 1949. The snakes of Somaliland and the Sokotra islands. *Zoologische Verhandelingen*, 6:1–115.
- PARRY, C.R. 1982. A revision of southern African *Ptychocheilus* Tschudi (Anura: Ranidae). *Annals of the Natal Museum*, 25(1):281–192.
- PASSMORE, N.I., AND V.C. CARRUTHERS. 1975. A new species of *Tomopterna* (Anura: Ranidae) from the Kruger National Park, with notes on related species. *Koedoe*, 18:31–50.
- PASTEUR, G. 1964. Recherches sur l'évolution des Iguodontes, lézards Afro-Malgaches actuels. *Travaux de l'Institut Scientifique Chérifien, Série Zoologie*, 9:1–132, pls. 1–12.
- PAUWELS, O.S.G., AND J.P. VANDE WEGHE. 2008. *Les Reptiles du Gabon*. Smithsonian Institution, Washington, D.C., USA. 272 pp.
- PERRET, J.-L. 1975. Les Gekkonidae du Cameroun, avec la description de deux sous-espèces nouvelles. *Revue Suisse de Zoologie*, 82:185–192.
- PETERS, W.C.H. 1844. Über einige neue Fische und Amphibien aus Angola und Mozambique. *Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1844:32–37.
- PETERS, W.C.H. 1854. Diagnosen neuer Batrachier, welche zusammen mit der früher (24. Juli und 17. August) gegebenen Übersicht der Schlangen und Eideschen mitgeteilt worden. *Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1854:614–628.
- PETERS, W.C.H. 1862a. Übersicht einiger von dem, durch seine afrikanische Sprachforschungen, rühmlichst bekannten, Hrn. Missionär C. H. Hahn bei Neu-Barmen, im Hererolande, and der Westküste von Afrika, im 21° südl. Br. gesammelten Amphibien, nebst Beschreibungen der neuen. *Monatsberichte der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1862:15–26.
- PETERS, W.C.H. 1862b. Über die von dem so früh in Afrika verstorbenen Freiherrn von Barnim und Dr. Hartmann auf ihrer Reise durch Aegypten, Nubien und dem Sennâr gesammelten Amphibien. *Monatsberichte der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1862:271–279, 1 pl.
- PETERS, W.C.H. 1865. [Ein fernere] Nachtrag zu [Peters] Abhandlung über *Typhlopina*. *Monatsbericht der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1865:259–263, 1 pl.
- PETERS, W.C.H. 1867a. Über eine Sammlung von Flederthieren und Amphibien aus Otjimbingue in Südwestafrika, welche Hr. Missionär Hahn dem zoologischen Museum zugesandt hat. *Monatsbericht der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1867: 234–237, 1 pl.
- PETERS, W.C.H. 1867b. Herpetologische Notizen. *Monatsbericht der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1867:13–37.
- PETERS, W.C.H. 1868. Über eine neue Nagergattung, *Chiropodomys penicillatus*, sowie über einige neue oder weniger bekannte Amphibien und Fische. *Monatsbericht der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1868:448–461.
- PETERS, W.C.H. 1869. Über neue Gattungen und Arten von Eidechsen. *Monatsbericht der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1869:57–66.
- PETERS, W.C.H. “1869” 1870. Förtekning på de af J. Wahlberg i Damaralandet insamlade Reptilierna. *Öfversigt af Kongl. Vetenskaps-Akademiens Förhandlingar*, 26(7):657–662.
- PETERS, W.C.H. 1870. Über neue Amphibien (*Hemidactylus*, *Urosauria*, *Tropidolepisma*, *Geophis*, *Uriechis*, *Scaphiophis*, *Hoplocephalus*, *Rana*, *Entomoglossus*, *Cystignathus*, *Hylodes*, *Arthroleptis*, *Phyllobates*, *Cophomantis*) des Königlich-zoologischen Museums. *Monatsberichte der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1870:641–652, pls. 1–2.
- PETERS, W.C.H. 1873. Über eine neue Schildkrötenart, *Cinosternon effeldtii* und einige andere neue oder weniger bekannte Amphibien. *Monatsberichte der Königlich Preussische Akademie der Wissenschaften zu Berlin*, 1873:603–618, 1 folding plate.

- PETERS, W.C.H. 1875. Über die von Hrn. Professor Dr. R. Buchholz in Westafrika gesammelten Amphibien. *Monatsberichte der Königlichen Preussische Akademie des Wissenschaften zu Berlin*, 1875:196–212, pls. 1–3.
- PETERS, W.C.H. 1876. Eine zweite Mittheilung über die von Hrn. Professor Dr. R. Buchholz in Westafrika gesammelten Amphibien. *Monatsberichte der Königlichen Preussische Akademie des Wissenschaften zu Berlin*, 1876:117–123, pl. 1.
- PETERS, W.C.H. 1877a. Übersicht der Amphibien aus Chinchoxo (Westafrika), welche von der Afrikanischen Gesellschaft dem Berliner zoologischen Museum übergeben sind. *Monatsberichte der Königlichen Preussische Akademie des Wissenschaften zu Berlin*, 1877:611–621, 1 pl.
- PETERS, W.C.H. 1877b. Herpetologische Notizen. *Monatsberichte der Königlichen Preussische Akademie des Wissenschaften zu Berlin*, 1877:407–423, 1 pl.
- PETERS, W.C.H. 1878. Über die von Hrn. J. M. Hidebrandt während seiner letzten ostafrikanischen Reise gesammelten Säugethiere und Amphibien. *Monatsberichte der Königlichen Preussische Akademie der Wissenschaften zu Berlin* 1878:194–209, pls. 1–2.
- PETERS, W.C.H. 1879. Neue oder weniger bekannte Eidechsenarten aus der Familie der Scinci (*Eumeces guntheri*, *Euprepes notabilis*, *Ablepharus rutilus*). *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin*, 1879(3):35–37.
- PETERS, W.C.H. 1881. Zwei neue von Herrn major von Mechow während seiner letzten expedition nach west-Afrika entdeckte schlangen und eine übersicht der von ihm mitgebrachten herpetologischen Sammlung. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin*, 1881:147–150.
- PETERS, W.C.H. 1882a. Über neue Batrachier der Gattung *Hyperolius* und *Limnodytes* (*Hylorana*) aus Africa. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin*, 1882:8–10.
- PETERS, W.C.H. 1882b. Drei neue Batrachier (*Amblystoma Krausei*, *Nyctibatrachus sinensis*, *Bufo buchneri*). *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin*, 1882:145–148.
- PETERS, W.C.H. 1882c. *Naturwissenschaftliche Reise nach Mossambique auf Befehl seiner Majestät es Königs Friedrich Wilhelm IV. Zoologie, III. Amphibien*. G. Reimer, Berlin, Germany. xv + 191 pp., 33 pls.
- PETZOLD, A., M. VARGAS-RAMÍREZ, C. KEHLMAIER, M. VAMBERGER, W.R. BRANCH, L. DU PREEZ, M.D. HOFMEYR, L. MEYER, A. SCHLEICHER, P. SIROKÝ, AND U. FRITZ. 2014. A revision of African helmeted terrapins (Testudines: Pelomedusidae: *Pelomedusa*), with descriptions of six new species. *Zootaxa*, 3795(5):523–548.
- PERACCA, M.G. 1896. Rettili et anfibi raccolti a Kazungula e sulla strada da Kazungula a Buluwaio dal Ver. Luigi Jalla, missionario valdese nell' alto Zambese. *Bollettino dei Musei di Zoologia e Anatomia Comparata della R. Università di Torino*, 11(255):1–4.
- PERRET, J.-L. 1966. Les amphibiens du Cameroun. *Zoologische Jahrbücher, Abteilung für Systematik, Ökologie und Geographie*, 93:289–464.
- PERRET, J.-L. 1973. Contribution à l'étude des *Panaspis* (Reptilia, Scincidae) d'Afrique occidentale avec la description de deux espèces nouvelles. *Revue suisse de Zoologie*, 80(2):592–630.
- PERRET, J.-L. 1975. Les sous-espèces d'*Hyperolius ocellatus* Günther (Amphibia, Salientia). *Annales de la Faculté des Sciences du Cameroun, Yaoundé*, 20:23–31.
- PERRET, J.-L. 1976A. Révision des amphibiens africains et principalement des types, conservés au Musée Bocage de Lisbonne. *Arquivos do Museu Bocage, Segunda Série*, 6(2):15–34.
- PERRET, J.-L. 1976B. Identité de quelques *Afraxalus* (Amphibia, Salientia, Hyperoliidae). *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, 99:19–28.
- PERRET, J.-L. 1977. Les *Hylarana* (Amphibiens, Ranidés) du Cameroun. *Revue Suisse de Zoologie*, 84: 841–868.
- PERRET, J.-L. 1979. Remarques et mise au point sur quelques espèces de *Ptychadena* (Amphibia, Ranidae). *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, 102:5–21.
- PERRET, J.-L. 1996. Sur un énigmatique batracien d'Angola. *Bulletin de la Société Neuchâteloise des Sciences Naturelles*, 119:95–100.
- PFEFFER, G. 1893. Ostafrikanische Reptilien und Amphibien, gesammelt von Herrn Dr. F. Stuhlmann im Jahre 1888 und 1889. *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten*, 10:69–105, pls. 1–2.
- PHILLIPS, J. 2004. *Varanus albigularis*. Pages 91–94 in E.R. Pianka, D.R. King, and R.A. King, eds., *Varanoid*

- Lizards of the World*. Indiana University Press, Bloomington, Indiana, USA. xiii + 588 pp., 32 pp. pls.
- PICCO A.M., AND J.P. COLLINS. 2008. Amphibian commerce as a likely source of pathogen pollution. *Conservation Biology*, 22:1582–1589.
- PICKERSGILL, M. 2007a. *Frog Search. Results of Expeditions to Southern and Eastern Africa from 1993–1999*. Edition Chimaira, Frankfurt am Main, Germany 574 pp.
- PICKERSGILL, M. 2007b. A redefinition of *Afrixalus fulvovittatus* (Cope, 186) and *Afrixalus vittiger* (Peters, 1876) (Amphibia, Anura, Hyperoliidae). *African Journal of Herpetology*, 56:23–37.
- PINTO, A.A.R. 1983. *Ornitologia de Angola*. Volume I (Non Passeres). Instituto de Investigação Científica Tropical, Lisboa, Portugal. cxxxvi + 696 pp., 48 pls.
- PITRA, C., P. VAZ PINTO, B.W. O'KEEFFE, S. WILLOWS-MUNRO, B.J. VAN VUUREN, AND T.J. ROBINSON. 2006. DNA-led rediscovery of the giant sable antelope in Angola. *European Journal of Wildlife Research*, 52:145–152.
- PORTIK, D.M., AND A.M. BAUER. 2012. Untangling the complex: molecular patterns in *Trachylepis variegata* and *T. punctulata* (Reptilia: Scincidae). *African Journal of Herpetology*, 61(2):128–142.
- PORTIK, D.M., A.M. BAUER, AND T.R. JACKMAN. 2010. The phylogenetic affinities of *Trachylepis sulcata nigra* and the intraspecific evolution of coastal melanism in the western rock skink. *African Zoology* 45: 147–159.
- PORTIK, D.M., A.M. BAUER, AND T.R. JACKMAN. 2011. Bridging the gap: western rock skinks (*Trachylepis sulcata*) have a short history in South Africa. *Molecular Ecology*, 20:1744–1758.
- POUNDS, A.J., M.R. BUSTAMANTE, L.A. COLOMA, J.A. CONSUEGRA, M.P.L. FOGDEN, P.N. FOSTER, E. LA MARCA, K.L. MASTERS, A. MERINO-VITERI, R. PUSCHENDORF, S.R. RON, G. A. SÁNCHEZ-AZOFEIFA, C.J. STILL, AND B.E. YOUNG. 2006. Widespread amphibian extinctions from epidemic disease driven by global warming. *Nature*, 439:161–167.
- POWER, J.H. 1927. On the herpetological fauna of the Lobatsi-Linokana area. *Transactions of the Royal Society of South Africa*, 14:405–422.
- POYNTON, J.C. 1982. On species pairs among southern African amphibians. *South African Journal of Zoology*, 17:67–74.
- POYNTON, J.C. 1964. Amphibia of southern Africa: a faunal study. *Annals of the Natal Museum*, 17:1–334.
- POYNTON, J.C. 1970. Guide to the *Ptychadena* (Amphibia: Ranidae) of the southern third of Africa. *Annals of the Natal Museum*, 20:365–375.
- POYNTON, J.C. 1985. Nomenclatural revision of southeast african treefrogs of the genus *Leptopelis* (Amphibia: Hyperoliidae). *South African Journal of Science*, 81:466–468.
- POYNTON, J.C. 1986 *Hyperolius argus* (Anura) in Natal: taxonomy, biogeography and conservation. *South African Journal of Zoology*, 21:149–152.
- POYNTON, J.C. 1992. On species pairs among southern African amphibians. *South African Journal of Zoology*, 17:67–74.
- POYNTON, J.C., AND D.G. BROADLEY. 1985a. Amphibia Zambesiaca 1. Scolecomorphidae, Pipidae, Microhylidae, Hemisidae, Arthroleptidae. *Annals of the Natal Museum*, 26:503–553.
- POYNTON, J.C., AND D.G. BROADLEY. 1985b. Amphibia Zambesiaca 2. Ranidae. *Annals of the Natal Museum*, 27:115–181.
- POYNTON, J.C., AND D.G. BROADLEY. 1987. Amphibia Zambesiaca 3. Rhacophoridae and Hyperolidae. *Annals of the Natal Museum*, 28:161–229.
- POYNTON, J.C., AND D.G. BROADLEY. 1988. Amphibia Zambesiaca, 4. Bufonidae. *Annals of the Natal Museum*, 29:447–490.
- POYNTON, J.C., AND W.D. HAACKE. 1993. On a collection of amphibians from Angola, including a new species of *Bufo* Laurenti. *Annals of the Transvaal Museum*, 36(2):9–16.
- POYNTON, J.C., S.P. LOADER, W. CONRADIE, M.-O. RÔDEL, AND H.C. LIEDTKE. 2016. Designation and description of a neotype of *Sclerophrys maculata* (Hallowell, 1854), and reinstatement of *S. pusilla* (Mertens, 1937) (Amphibia: Anura: Bufonidae). *Zootaxa*, 4098:73–94.
- PYRON, R.A., F.T. BURBRINK, G.R. COLLI, A.N.M. DE OCA, L.J. VITT, C.A. KUCZYNSKI, AND J.J. WIENS. 2011. The phylogeny of advanced snakes (Colubridae), with discovery of a new subfamily and comparison of support methods for likelihood trees. *Molecular Phylogenetics and Evolution*, 58(2):329–342.

- PYRON, R.A., F.T., BURBRINK, AND J.J. WIENS. 2013. A phylogeny and revised classification of Squamata, including 4161 species of lizards and snakes. *BMC Evolutionary Biology*, 13:93. DOI: 10.1186/1471-2148-13-93.
- RACHLOW, J.L., AND L.K. SVANCARA. 2006. Prioritizing habitat for surveys of an uncommon mammal: a modelling approach applied to pygmy rabbits. *Journal of Mammalogy*, 87(5):827–833.
- RAPP, W. VON. 1842. Neue batrachier. *Archiv für Naturgeschichte*, 8:289–291, pl. 6.
- RASMUSSEN, J.B. 1986. On the taxonomic status of *Dipsadoboa werner* (Boulenger), *D. shrevei* (Loveridge), and *Crotaphopeltis hotamboeia kageleri* Uthmöller (Boiginae, Serpentes). *Amphibia-Reptilia*, 7: 51–73.
- RASMUSSEN, J.B. 1993. A taxonomic review of the *Dipsadoboa unicolor* complex, including a phylogenetic analysis of the genus (Serpentes, Dipsadidae, Boiginae). *Steenstrupia*, 19(4):129–196.
- RASMUSSEN, J.B. 2005. On the identification and distribution of the two-striped night adder (*Causus bilineatus*) and related forms. *African Journal of Herpetology*, 54(1):1–15.
- RASMUSSEN, J.B., AND B. HUGHES. 1997. Description of some new snake species. I.TH. Reinhardt. Vid. Sel. naturvid. Og mathem. Afh. (1843) X Part: 233–279. *Steenstrupia*, 22:13–39.
- RAW, L.R.G. 1978. Taxonomic notes on the hinged terrapins, genus *Pelusios*, of Natal (Testudinata, Pelomedusidae). *Durban Museum Novitates*, 11(17):287–294.
- REDDY, S., AND L.M. DÁVALOS. 2003. Geographical sampling bias and its implications for conservation priorities in Africa. *Journal of Biogeography*, 30:1719–1727.
- REICHENOW, A. 1887. Neue Wirbelthiere des Zoologischen Museums in Berlin. *Zoologischer Anzeiger*, 10:369–372.
- REINHARDT, J.T. 1843. Beskrivelse af nogle nye slangearter. *Danske Videnskabernes Selskabs Skrifter, Naturvidenskabelig og Mathematisk Afdeling*, 10:233–279, pls. 1–3.
- REUSS, A. 1833. Zoologischen Miscellen. Reptilien. Saurier. Batrachier. *Museum Senckenbergianum*, 1:27–62, pl. 3.
- RICHMAN, N., AND M. BÖHM. 2011. *Nucras scalaris*. The IUCN Red List of Threatened Species 2011: e.T178612A7581133. <<http://dx.doi.org/10.2305/IUCN.UK.2011-1.RLTS.T178612A7581133.en>>. Downloaded on 10 February 2017.
- ROCHEBRUNE, A.T. DE. 1885. Vertébratunum novorum vel minus cognitorum orae Africae occidentalis incolarum. Diagnoses (1). *Bulletin de la Société Philomathique de Paris*, 9:86–99.
- RÖDEL, M.-O. 2000. *Herpetofauna of West Africa*. Volume I. *Amphibians of the West African Savanna*. Edition Chimaira, Frankfurt am Main, Germany. 332 pp.
- RÖDEL, M.-O., AND R. ERNST. 2003. The amphibians of Marahoué and Mont Péko national parks, Ivory Coast. *Herpetozoa*, 16:23–39.
- RÖDEL, M.-O., L. SANDBERGER, J. PENNER, Y. MANÉ, AND A. HILLERS. 2010. The taxonomic status of *Hyperolius nitidulus* Peters, 1875 (Amphibia: Anura: Hyperoliidae). *Bonn Zoological Bulletin*, 57(2):177–188.
- RODRIGUES, A.S.L., S.J. ANDELMAN, M.I. BAKARR, L. BOITANI, T.M. BROOKS, R.M. COWLING, L.D.C. FISHPOOL, G.A.B. DA FONSECA, K.J. GASTON, M. HOFFMANN, J.S. LONG, P.A. MARQUET, J.D. PILGRIM, R.L. PESSEY, J. SCHIPPER, W. SECHREST, S.N. STUART, L.G. UNDERHILL, R.W. WALLER, M.E., J. WATTS, AND X. YAN. 2004. Effectiveness of the global protected area network in representing species diversity. *Nature*, 428:640–642.
- RODRIGUES, P., R. FIGUEIRA, P.VAZ PINTO, M.B. ARAÚJO, AND P. BEJA. 2015. A biogeographical regionalization of angolan mammals. *Mammal Review*, 45(2):103–116.
- ROHR, J.R. AND T.R. RAFFEL. 2010. Linking global climate and temperature variability to widespread amphibian declines putatively caused by disease. *Proceedings of the National Academy of Sciences of the United States*, 107:8269–8274.
- ROMEIRAS, M.M., R. FIGUEIRA, M.C. DUARTE, P. BEJA, AND I. DARBYSHIRE. 2014. Documenting biogeographical patterns of african timber species using herbarium records: a conservation perspective based on native trees from Angola. *PLoS ONE*, 9(7):e103403. DOI:10.1371/journal.pone.0103403.
- ROUGET, M., D.M. RICHARDSON, AND R.M. COWLING. 2003. The current configuration of protected areas in the Cape floristic region South Africa – reservation bias and representation of biodiversity patterns and processes. *Biological Conservation*, 112:129–145.

- ROUX-ESTÈVE, R. 1965. Les serpentes de La Maboké. *Cahiers de La Maboké*, 3:51–92.
- ROUX-ESTÈVE, R. 1974a. Recherches sur la morphologie, la biogéographie et la phylogénie des Typhlopidae d'Afrique. *Bulletin de l'Institut Fondamental d'Afrique Noire*, 36, série A, 2:429–508.
- ROUX-ESTÈVE, R. 1974b. Révision systématique des Typhlopidae d'Afrique Reptilia-Serpentes. *Mémoires du Muséum National d'Histoire Naturelle*, Nouvelle Série, Série A Zoologie 87:1–313.
- RUAS, C. 1996. Contribuicao para o conhecimento da fauna de batraquios de Angola. *Garcia de Orta: Série de Zoologia*, 21(1):19–41.
- RUAS, C. 2002. Batráquios de Angola em coleção no Centro de Zoologia. *Garcia de Orta: Série de Zoologia*, 24(1–2):139–154.
- RUSSELL, A.P., AND A.M. BAUER. 1990. Substrate excavation in the namibian web-footed gecko, *Palmatogecko rangei* Andersson 1908, and its ecological significance. *Tropical Zoology*, 3:197–207.
- RYAN, P.G., I. SINCLAIR, C. COHEN, M.S.L. MILLS, C.N. SPOTTISWOODE, AND R. CASSIDY. 2004. The conservation status and vocalizations of threatened birds from the scarp forest of the western Angola endemic bird area. *Bird Conservation International*, 14:247–260.
- SABAJ, M.H. 2016. Standard symbolic codes for institutional resource collections in herpetology and ichthyology: an Online Reference. Version 6.5 (16 August 2016). Electronically accessible at <<http://www.asih.org/>>, American Society of Ichthyologists and Herpetologists, Washington, D.C., USA.
- SAINT-HILAIRE, I.G. 1809. Reptiles. Pls. 1–8 in SAVIGNY, M.J.-C.L. DE (ed.), *Description de l'Égypte, ou Recueil des Observations et des Recherches qui ont été Faites en Égypte Pendant l'Expédition de l'Armée Française. Histoire Naturelle, Planches*. Tome premier. Imprimerie Impériale, Paris, France.
- SALDANHA, L. 1966. Fauna do Noroeste de Angola. *Geographica*, Ano II, 8:2–15.
- SAYRE, R., P. COMER, J. HAK, C. JOSSE, J. BOW, H. WARNER, M. LARWANOU, E. KELBESSA, T. BEKELE, H. KEHL, R. AMENA, R. ANDRIAMASIMANANA, T. BA, L. BENSON, T. BOUCHER, M. BROWN, J. CRESS, O. DASSERING, B. FRIESEN, F. GACHATHI, S. HOUCINE, M. KEITA, E. KHAMALA, D. MARANGU, F. MOKUA, B. MOROU, L. MUCINA, S. MUGISHA, E. MWAVU, M. RUTHERFORD, P. SANOU, S. SYAMPUNGANI, B. TOMOR, A. VALL, J. VANDE WEGHE, E. WANGUI, AND L. WARUINGI. 2013. *A New Map of Standardized Terrestrial Ecosystems of Africa*. Association of American Geographers, Washington D.C., USA. 24 pp.
- SCHÄTTI, B., AND C. LOUMONT. 1992. A contribution to the herpetofauna of Sao Tome (Gulf of Guinea) (Amphibia & Reptilia). *Abhandlungen aus dem Staatlichen Museum fur Tierkunde in Dresden*, 47: 23–36.
- SCHÄTTI, B., AND J.-L. PERRET. 1997. Catalogue révisé des types d'amphibiens et de reptiles du Muséum d'histoire naturelle de Genève. *Revue Suisse de Zoologie*, 104:357–370.
- SCHILTHUIS, L. 1889. On a small collection of Amphibia from the Congo with description of a new species. *Tijdschrift der Nederlandsche Dierkundige Vereeniging* 2(2):285–286.
- SCHIÖTZ, A. 1975. *The Treefrogs of Eastern Africa*. Stestrupia, Copenhagen, Denmark. 232 pp.
- SCHIÖTZ, A. 1999. *Treefrogs of Africa*. Editions Chimaira, Frankfurt am Main, Germany. 350 pp.
- SCHIÖTZ, A. 2006a. Reflection on the *Hyperolius nasutus* group (Anura, Hyperoliidae). *Alytes*, 14(1–4):61–71.
- SCHIÖTZ, A. 2006b. Notes on the genus *Hyperolius* (Anura, Hyperoliidae) in central République Démocratique du Congo. *Alytes*, 24:40–60.
- SCHIÖTZ, A., AND P. VAN DAELE. 2003. Notes on the treefrogs (Hyperoliidae) of the North-Western province, Zambia. *Alytes*, 20(3–4):137–149.
- SCHLEGEL, H. 1837. *Essai sur la Physionomie des Serpens. Partie Descriptive*. H.M. Schonekat, Amsterdam, The Netherlands. 606 + xvi pp.
- SCHLEGEL, H. 1851. Description d'une nouvelle espèce du genre *Eryx*, *Eryx reinhardtii*. *Bijdragen tot de Dierkunde*, 3(1):1–3, 1 pl.
- SCHLÜTER, T. 2006. *Geological Atlas of Africa, with Notes on Stratigraphy, Economic Geology, Geohazards and Geosites of Each Country*. Springer-Verlag, Berlin, Germany. xii + 272 pp., CD-ROM.
- SCHMIDT, K.P. 1919. Contributions of the herpetology of the Belgian Congo based on the collection of the American Museum Congo Expedition, 1909–1915. Part I, Turtles, crocodiles, lizards and chamaeleons. *Bulletin of the American Museum of Natural History*, 39:385–624, pls. 7–32.
- SCHMIDT, K.P. 1923. Contributions to the herpetology of the Belgian Congo based on the collection of the American Museum Congo Expedition, 1909–1915. Part II. Snakes, with field notes by Herbert Lang and

- James P. Chapin. *Bulletin of the American Museum of Natural History*, 49(1):1–146, pls. 1–22.
- SCHMIDT, K.P. 1933. The reptiles of the Pulitzer-Angola Expedition. *Annals of the Carnegie Museum*, 22: 1–15, pls. 1–2.
- SCHMIDT, K.P. 1936. The amphibians of the Pulitzer-Angola Expedition. *Annals of the Carnegie Museum*, 25:127–133.
- SCHMIDT, K.P., AND R.F. INGER. 1959. Amphibians exclusive of the genera *Afrixalus* and *Hyperolius*. *Exploration du Parc National de l'Upemba. Mission G.F. de Witte, en collaboration avec W. Adam, A. Janssens, L. van Meel et R. Verheyen (1946–1949)* 56:1–264, pls. 1–9, 1 folding map.
- SCHMITZ, A., P. MAUSFELD, E. HEKKALA, T. SHINE, H. NICKEL, G. AMATO, AND W. BÖHME. 2003. Molecular evidence for species level divergence in African Nile crocodiles *Crocodylus niloticus* (Laurenti, 1786 [sic, 1768]). *Comptes Rendus Palevol*, 2:703–712.
- SCHNEIDER, V., AND A.M. BAUER. 2009. *Typhlosaurus jappi* Broadley, 1968, a valid species of acontine skink. *African Journal of Herpetology*, 58(1):56–58.
- SCHUYT, K.D. 2005. Economic consequences of wetland degradation for local populations in Africa. *Ecological Economics*, 53(2):177–190.
- SCHWEIGGER, A.F. 1812. Prodrum monographia cheloniorum. *Königsberger Archiv für Naturwissenschaft und Mathematik*, 1:271–368, 406–458.
- SCOTT, E., J.D. VISSER, C. YETMAN, L. OLIVER, AND D.G. BROADLEY. 2013. Revalidation of *Pyxicephalus angusticeps* Parry, 1982 (Anura: Natatanura: Pyxicephalidae), a bullfrog endemic to the lowlands of eastern Africa. *Zootaxa*, 3599(3):201–228.
- SEBA, A. 1734. *Locupletissimi Rerum Naturalium Thesauri Accurata Descriptio, et Iconibus Artificiosissimis Expressio, per Universam Physices Historiam. Opus, cui, in hoc Rerum Genere, Nullum par Exstitit. Ex toto Terrarum Orbe Collegit, Digessit, et Depingendum Curavit Albertus Seba, Etzela Oosterisius, Academiae Caesareae Leopoldino Carolinae Naturae Curiosorum Collega Xenocrates Dictus; Societatis Regiae Anglicanae, et Instituti Bononiensis, Sodalis. Tomus I. Wetstenium, Smith & Janssonio-Waesbergios, Amstelædami [Amsterdam], The Netherlands. [32] + 178 pp., 111 pls.*
- SEBA, A. 1735. *Locupletissimi Rerum Naturalium Thesauri Accurata Descriptio, et Iconibus Artificiosissimis Expressio, per Universam Physices Historiam. Opus, cui, in hoc Rerum Genere, Nullum par Exstitit. Ex toto Terrarum Orbe Collegit, Digessit, et Depingendum Curavit Albertus Seba, Etzela Oosterisius, Academiae Caesareae Leopoldino Carolinae Naturae Curiosorum Collega Xenocrates Dictus; Societatis Regiae Anglicanae, et Instituti Bononiensis, Sodalis. Tomus II. Wetstenium, & Gul. Smith, & Janssonio-Waesbergios, Amstelodami [Amsterdam], The Netherlands. [34] + 154 pp., 114 pls.*
- SEGNAGBETO, G.H., J.F., TRAPE, P. DAVID, A. OHLER, A. DUBOIS, AND I.A. GLITHO. 2011. The snake fauna of Togo: systematics, distribution and biogeography, with remarques on selected taxonomic problems. *Zoosystema*, 33(3):325–360.
- SEKERCIOGLU C.H., AND A. RILEY. 2005. A brief survey of the birds in Kumbira Forest, Gabela, Angola. *Ostrich*, 76:3–4.
- SERRANO, A.R., AND R.A. CAPELA. 2013. The tiger beetles (Coleoptera: Carabidae, Cicindelinae) of Angola: a descriptive catalogue and designation of neotypes. *Zootaxa*, 3731:401–444.
- SERRANO, A.R., AND R.A. CAPELA. 2015. New records of ant nest beetles (Coleoptera: Carabidae: Paussinae: Paussini) in Angola and an annotated list of species known from the country. *The Coleopterists Bulletin*, 69(3):525–528.
- SERRANO, A.R., R.A. CAPELA, AND A. OESTERIE. 2015. Three new species of tiger beetles and new data on *Cicindelina* species from Angola (Coleoptera: Carabidae: Cicindelinae). *Zootaxa*, 4032(2):151–178.
- SHAW, G. 1802. *General Zoology, or Systematic Natural History*. Volume 3. *Amphibia*. G. Kearsley, London, United Kingdom. [2] + vi + [2] + 312 + [2] + vi + [2] + 303 [313–615] pp.
- SHAW, G., AND F.P. NODDER. 1792. *The Naturalist's Miscellany. Containing Accurate and Elegant Coloured Figures of the Most Curious and Beautiful Productions of Nature, with Descriptions in Latin and English in the Linnaean Manner. To which are added Descriptions more at large, and Calculated for General Information*. Vol. 3. J. Cooper, London, United Kingdom. Pls. 75–110 and associated unnumbered text pages.
- SHIRLEY, M.H. 2010. Slender-snouted Crocodile *Crocodylus cataphractus*. Pages 54–58 in S.C. Manolis and

- C. Stevenson, eds., *Crocodiles. Status Survey and Conservation Action Plan*, Third Edition. Crocodile Specialist Group, Darwin, Northern Territory, Australia.
- SHIRLEY, M.H., K.A. VLIET, A.N. CARR, AND J.D. AUSTIN. 2014. Rigorous approaches to species delimitation have significant implications for African crocodilian systematics and conservation. *Proceedings of the Royal Society*, 281B: 2013–2483.
- SIMON, J. 1983. *Scientific Expeditions in the Portuguese Overseas Territories (1783–1808) and the Role of Lisbon in the Intellectual-Scientific Community of the Late Eighteenth Century*. Instituto de Investigação Científica Tropical, Lisboa, Portugal. 193 pp.
- SINCLAIR, I., C. SPOTTISWOODE, C. COHEN, C., M. MILLS, R. CASSIDY, P. VAZ PINTO, AND P. RYAN. 2004. Birding western Angola. *Bulletins of the African Bird Club*, 11(2):152–159.
- SINERVO, B., F. MÉNDEZ-DE-LA-CRUZ, D.B. MILES, B. HEULIN, E. BASTIAANS, M. VILLAGRÁN-SANTA CRUZ, R. LARA-RESENDIZ, N. MARTÍNEZ-MÉNDEZ, M.L. CALDERÓN-ESPINOSA, R.N. MEZA-LÁZARO, H. GADSDEN, L.J. AVILA, M. MORAND, O. I.J. DE LA RIVA, P. VICTORIANA SEPULVÉDA, C.G. ROCHA, N. IBARGUEN-GOYTIA, C. AGUILAR PUNTRIANO, M. MASSOT, V. LEPETZ, T.A. OKSANEN, D.G. CHAPPLE, A.M. BAUER, W.R. BRANCH, J. CLOBERT, AND J.W. SITES, JR. 2010. Erosion of lizard diversity by climate change and altered thermal niches. *Science*, 328, 894–899.
- SJÖSTEDT, Y. 1896. *Atractaspis reticulata*, eine neue Schlange aus Kamerun. *Zoologischer Anzeiger*, 19: 516–517.
- SLOWINSKI, J.B., AND J.S. KEOGH. 2000. Phylogenetic relationships of elapid snakes based on cytochrome b mtDNA sequences. *Molecular Phylogenetics and Evolution*, 15(1):157–164.
- SMITH, A. 1828. Descriptions of new or imperfectly known objects of the animal kingdom, found in the south of Africa. *South African Commercial Advertiser*, 3(144):2 (far right column).
- SMITH, A. 1831. Contributions to the natural history of South Africa, No. 1. *South African Quarterly Journal*, 2(5) (Series 1):9–24.
- SMITH, A. 1833. [untitled]. *South African Quarterly Journal*, 2(1, part 3) (Series 2):80.
- SMITH, A. 1838. Contributions to South African Zoology [continued]. *Magazine of Natural History*, Series 1, 2(14):92–94.
- SMITH, A. 1838–1849. *Illustrations of the Zoology of South Africa; Consisting Chiefly of Figures and Descriptions of the Objects of Natural History Collected during an Expedition into the Interior of South Africa, in the Years 1834, 1835, and 1836. Reptilia*. Smith, Elder & Co., London, United Kingdom. [3] + [188] + 28 pp., 78 pls.
- SMITH, A. 1840. *Illustrations of the Zoology of South Africa; Consisting Chiefly of Figures and Descriptions of the Objects of Natural History Collected during an Expedition into the Interior of South Africa, in the Years 1834, 1835, and 1836. Reptilia*. Part 9. Smith, Elder, & Co., London, United Kingdom.
- SMITH, A. 1844. *Illustrations of the Zoology of South Africa; Consisting Chiefly of Figures and Descriptions of the Objects of Natural History Collected during an Expedition into the Interior of South Africa, in the Years 1834, 1835, and 1836. Reptilia*. Part 21. Smith, Elder, & Co., London, United Kingdom.
- SMITH, A. 1847a. *Illustrations of the Zoology of South Africa; Consisting Chiefly of Figures and Descriptions of the Objects of Natural History Collected during an Expedition into the Interior of South Africa, in the Years 1834, 1835, and 1836. Reptilia*. Part 25. Smith, Elder, & Co., London, United Kingdom.
- SMITH, A. 1847b. *Illustrations of the Zoology of South Africa; Consisting Chiefly of Figures and Descriptions of the Objects of Natural History Collected during an Expedition into the Interior of South Africa, in the Years 1834, 1835, and 1836. Reptilia*. Part 26. Smith, Elder, & Co., London, United Kingdom.
- SMITH, A. 1848. *Illustrations of the Zoology of South Africa; Consisting Chiefly of Figures and Descriptions of the Objects of Natural History Collected during an Expedition into the Interior of South Africa, in the Years 1834, 1835, and 1836. Reptilia*. Part 27. Smith, Elder, & Co., London, United Kingdom.
- SMITH, A. 1849a. *Illustrations of the Zoology of South Africa; Consisting Chiefly of Figures and Descriptions of the Objects of Natural History Collected during an Expedition into the Interior of South Africa, in the Years 1834, 1835, and 1836. Reptilia*. Part 28. Smith, Elder, & Co., London, United Kingdom.
- SMITH, A. 1849b. Appendix. Pages 1–28 in *Illustrations of the Zoology of South Africa; Consisting Chiefly of Figures and Descriptions of the Objects of Natural History Collected during an Expedition into the Interior of South Africa, in the Years 1834, 1835, and 1836. Reptilia*. Smith, Elder, & Co., London, United

- Kingdom. [3] + [188] + 28 pp., 78 pls.
- SMITH, M.A. 1937. A review of the genus *Lygosoma* (Scincidae: Reptilia) and its allies. *Records of the Indian Museum*, 38(3):213–234.
- SOHDI, N.S., D. BICKFORD, A.C. DIESMOS, T.M. LEE, L.P. KOH, B.W. BROOK, C.H. SEKERCIOGLU, AND C.J.A. BRADSHAW. 2008. Measuring the meltdown: drivers of global amphibian extinction and decline. *PLoS ONE*, 3(2): e1636. DOI: 10.1371/journal.pone.0001636.
- SPAWLS, S. 2010. *Acanthocercus atricollis*. The IUCN Red List of Threatened Species 2010: e.T170364A6769386. <<http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T170364A6769386.en>>. Downloaded on 12 December 2011.
- SPAWLS, S. 2017. *Mochlus sundevalli*. The IUCN Red List of Threatened Species 2017: e.T178641A110249898. <<http://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T178641A110249898.en>>. <<http://www.iucnredlist.org/details/170364/0>> Downloaded on 12 December 2017. Downloaded on 3 December 2017.
- SPAWLS, D., AND W.R. BRANCH. 1995. *The Dangerous Snakes of Africa, Natural History, Species Directory, Venoms and Sankebite*. Southern Book Publishers, Halfway House, South Africa. 192 pp.
- SPAWLS, S., K. HOWELL, R.C. DREWES, AND J. ASHE. 2004. *Field Guide to the Reptiles of East Africa*. A & C Black, London, United Kingdom. 543 pp.
- STANLEY, E. L., A.M. BAUER, T.R. JAC KMAN, W.R. BRANCH, AND P.F. MOUTON. 2011. Between a rock and a hard polytomy: rapid radiation in the rupicolous girdled lizards (Squamata: Cordylidae). *Molecular Phylogenetics and Evolution*, 58(1):53–70.
- STANLEY, E.L., L.M.P., CERÍACO, S. BANDEIRA, H. VALÉRIO, M.F. BATES, AND W.R. BRANCH. 2016. A review of *Cordylus machadoi* (Squamata: Cordylidae) in southwestern Angola, with the description of a new species from the pro-namib desert. *Zootaxa*, 4061(3):201–226.
- STEINDACHNER, F. 1867. *Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859 unter den Befehlen des Commodore B. von Wüllerstorff-Urbair. Zoologischer Theil. 1. Amphibien. Kaiserlich-Königliche Hof- und Staatsdruckerei, Wien [Vienna], Austria. 70 pp., 5 pls.*
- STEJNEGER, L. “1893” 1894. Description of a new species of blind snake (Typhlopidae) from the Congo Free State. *Proceedings of the United States National Museum*, 16:709–710.
- STERNFELD, R. 1908. Neue und ungenügend bekannte afrikanische Schlangen. *Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin*, 1908(4):92–95.
- STERNFELD, R. 1917. Reptilia und Amphibia. Pages 407–510, pls. 22–24 in H. SCHUBOTZ (ed.), *Ergebnisse der Zweiten Deutschen Zentral-Afrika-Expedition 1910-1911 unter Führung Adolph Friedrichs, Herzogs zu Mecklenburg*. Volume 1 (Zoologie). Klinkhardt & Biermann, Leipzig, Germany.
- STEYN, W., AND W.D. HAACKE. 1966. A new webfooted gekko (*Kaokogecko vanzyli* gen. et sp. nov.) from the north-western South West Africa. *Cimbebasia*, 18:1–23.
- STIMSON, A.F. 1969. Liste der rezenten Amphibien und Reptilien. Boidae (Boinae + Bolyeriinae + Loxoceminae + Pythoninae). *Das Tierreich* 89. Walter de Gruyter, Berlin, Germany. xi + 49 pp.
- STOCKWELL, D.R.B., AND A.T. PETERSON. 2002. Effects of sample size on accuracy of species distribution models. *Ecological Modelling*, 148:1–13.
- STRAUCH, A. 1867. Bemerkungen über die Eidechsegattung *Scapteira* Fitz, von Dr. A. Strauch. *Mélanges Biologiques tirés du Bulletin de l'Académie Impériale des Sciences de St. Pétersbourg*, 6:402–426.
- STUART, S.N., J.S. CHANSON, N.A. COX, B.E. YOUNG, A.S.L. RODRIGUES, D.L. FISCHMAN, AND R.W. WALLER. 2004. Status and trends of amphibian declines and extinctions worldwide. *Science*, 306:1783–1786.
- STUCKAS, H., R. GEMEL, AND U. FRITZ. 2013. One extinct turtle species less: *Pelusios seychellensis* is not extinct, it never existed. *PLoS ONE*, 8(4):e57116. DOI: 10.1371/journal.pone.0057116.
- SVENSSON, M.S., E. BERSACOLA, M.S. MILLS, R.A. MUNDS, V. NIJMAN, A. PERKIN, J.C. MASTERS, S. COUETTE, K.A.-I. NEKARIS, AND S.K. BEARDER. 2017. A giant among dwarfs: a new species of galago (Primates: Galagidae) from Angola. *American Journal of Physical Anthropology*, 2017:1–14.
- SZCZERBAK, N.N. 1975. *Katalog Afrikanских Jaszczurok* [in Russian] [*Catalog of African Sand Lizards*]. Academy of Science, Ukrainian SSR, Zoological Institute of Zoological Museum, Kiev, Ukraine. 83 pp.
- TANDY, M., AND R. KEITH. 1972. *Bufo of Africa*. Pages 119–170 in W. F. BLAIR, ed., *Evolution in the Genus Bufo*. University of Texas Press, Austin, Texas, USA. viii + 459 pp., 2 folding tables, 6 pls.

- THEMIDO, A.A. 1941. Répteis e batráquios das colónias portuguesas (Catálogo das colecções do Museu Zoológico de Coimbra). *Memórias e Estudos do Museu Zoológico da Universidade de Coimbra*, 119:1–28.
- THEMUDO, G. E., C. RUFINO, C., AND P.F. CAMPOS. 2015. Complete mitochondrial DNA sequence of the endangered giant sable antelope (*Hippotragus niger varianti*): Insights into conservation and taxonomy. *Molecular Phylogenetics and Evolution*, 83:242–249.
- THIREAU, M., R.G. SPRACKLAND, AND T. SPRACKLAND. 1998. A report on Seba's specimens in the herpetological collection of the Museum National d'Histoire Naturelle, Paris, and their status as Linnaean types. *The Linnean*, 13:38–45.
- THYS VAN DEN AUDENAERDE, D.F.E. 1965. Les serpents des environs de Leopoldville. *Revue de Zoologie et Botanique Africaines*, 72(3–4):366–388.
- THYS VAN DEN AUDENAERDE, D.F.E. 1966. Les serpents des environs de Dundo (Angola) (Note complémentaire). *Publicações Culturais da Companhia de Diamantes de Angola*, 76:31–37.
- TIEDEMANN, F. AND M. HÄUPL. 1980. Typenkatalog der Herpetologischen Sammlung. Teil II: Reptilia. *Kataloge der wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien*, 4 (Vertebrata 2):1–79.
- TIEDEMANN, F., M. HÄUPL, AND H. GRILLITSCH. 1994. Kataloge der Typen der Herpetologischen Sammlung nach dem Stand vom 1. Jänner 1994. *Kataloge der wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien*, 10 (Vertebrata 4):1–110.
- TILBURY, C. 2010. *Chameleons of Africa, an Atlas Including the Chameleons of Europe, the Middle East and Asia*. Edition Chimaira, Frankfurt am Main, Germany. 831 pp.
- TILBURY, C.R., AND W.R. BRANCH. 1989. Observation on the bites of the southern burrowing asp (*Atractaspis bibronii*) in Natal. *The South African Medical Journal*, 75:327–331.
- TILBURY, C., AND K. TOLLEY. 2009. A re-appraisal of the systematics of the African genus *Chamaeleo* (Reptilia: Chamaeleonidae). *Zootaxa*, 2079:57–68.
- TORNIER, G. 1902. Die Crocodile, Schildkröten und Eidechsen in Kamerun. *Zoologische Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Thiere*, 15(6):663–667, pl. 35.
- TOWNSEND, T., AND A. LARSON. 2002. Molecular phylogenetics and mitochondrial genomic evolution in the Chamaeleonidae (Reptilia, Squamata). *Molecular Phylogenetics and Evolution*, 23(1):22–36.
- TRAILL, T.S. 1843. Description of the *Elaps Jamesoni*, a new species of serpent from Demerara. *Edinburgh New Philosophical Journal*, 34:53–55.
- TRAPE, J-F., L. CHIRIO, D.G. BROADLEY, AND W. WÜSTER. 2009. Phylogeography and systematic revision of the Egyptian cobra (Serpentes: Elapidae: *Naja haje*) species complex, with the description of a new species from west Africa. *Zootaxa*, 2236:1–25.
- TRAPE, J-F., S. TRAPE, AND L. CHIRIO. 2012. *Lézards, Crocodiles et Tortues d'Afrique Occidentale et du Sahara*. IRD Éditions, Marseille, France. 503 pp.
- TRAVERS, S.L. 2012. Molecular phylogenetics, species limits, and historical biogeography of southern African dwarf geckos, *Lygodactylus* Gray 1864 (Squamata: Gekkonidae). Unpublished M.S. thesis, Villanova University, Villanova, Pennsylvania, USA. ix + 103 pp.
- TRAYLOR, M.A. 1963. Check-list of Angolan birds. *Publicações Culturais da Companhia de Diamantes de Angola*, 61:11–250.
- TSCHUDI, J.J.V. 1838. *Classification der Batrachier, mit Berücksichtigung der fossilen Thiere dieser Abtheilung der Reptilien*. Petitpierre, Neuchâtel, Switzerland [preprint of paper in *Mémoires de la Société des Sciences Naturelles de Neuchâtel*, 2]. [2] + 99 + [1] pp., 6 pls.
- TURTLE TAXONOMY WORKING GROUP [VAN DIJK P.P., J.B. IVERSON, A.G.J. RHODIN, H.B. SHAFFER, AND R. BOUR]. 2014. Turtles of the world, 7th edition: annotated checklist of taxonomy, synonymy, distribution with maps and conservation status. Pages 000.320–479 in A.G.J. Rhodin, P.C.H. Pritchard, P.P. van Dijk, R.A. Saumure, K.A. Buhlmann, J.B. Iverson, and R.A. Mittermeier, eds., *Conservation Biology of Freshwater Turtles and Tortoises. Chelonian Research Monograph* 5.
- TURTLE TAXONOMY WORKING GROUP [RHODIN, A.G.J., J.B. IVERSON, R. BOUR, U. FRITZ, A. GEORGES, H.B. SHAFFER, AND P.P. VAN DIJK]. 2017. Turtles of the world, annotated checklist and atlas of taxonomy, synonymy, distribution, and conservation status (8th Ed.). *Chelonian Research Monograph* 7:1–292.
- UETZ, P., AND J. HOŠEK. 2016. The Reptile Database, <<http://www.reptile-database.org>>. accessed December 26, 2016.

- ULBER, T. (ed.). 2003. *Rare Herpetological Literature I*. Herprint International, Bredell, South Africa. v + 380 pp.
- ULLENBRUCH, K., P. KRAUSE, AND W. BÖHME. 2007. A new species of the *Chamaeleo dilepis* group (Sauria Chamaeleonidae) from West Africa. *Tropical Zoology*, 20:1–17.
- USAID. 2008. *Angola. Strengthening Land Tenure and Property Rights. Final report*. United States Agency for International Development, Washington, D.C., USA. 29 pp.
- VANDELLI, D. 1761. *Epistola de Holoturio, et Testudine coriacea ad Celeberrimum Carolum Linnaeum Equitem naturae curiosum. Dioscoridem II*. Typographia Conzatti, Patavii [Padua], Italy. 12 pp., 2 pls.
- VARGAS-RAMÍREZ, M., M. VENCES, W.R. BRANCH, S.R. DANIELS, F. GLAW, M.D. HOFMEYR, G. KUCHLING, J. MARAN, T.J. PAPPENFUSS, P. ŠIROKÝ, D.R. VIEITES, AND U. FRITZ. 2010. Deep genealogical lineages in the widely distributed African helmeted terrapin: evidence from mitochondrial and nuclear DNA (Testudines: Pelomedusidae: *Pelomedusa subrufa*). *Molecular Phylogenetics and Evolution* 56:428–440.
- VASCONCELOS, R., J.C. BRITO, S. CARRANZA, AND D.J. HARRIS. 2013. Review of the distribution and conservation status of the terrestrial reptiles of the Cape Verde islands. *Oryx*, 47(1):77–87.
- VAZ PINTO, P., AND W.R. BRANCH. 2015. Geographic Distribution — *Dendroaspis jamesoni* Traill, 1843, Jameson's Mamba. *African Herp News*, 62:45–47.
- VAZ PINTO, P., P. BEJA, N. FERRAND, AND R. GODINHO. 2016. Hybridization following population collapse in a critically endangered antelope. *Scientific Reports*, 6. DOI:10.1038/srep18788.
- VENCES, M., J. KOSUCH, M.-O. RÖDEL, A. CHANNING, F. GLAW, AND W. BÖHME. 2004. Phylogeography of *Ptychoadena mascareniensis* suggests transoceanic dispersal in a widespread African-Malagasy frog lineage. *Journal of Biogeography*, 31:593–601.
- VIDAL, N., W.R. BRANCH, O.S.G. PAUWELS, S.B. HEDGES, D.G. BROADLEY, M. WINK, C. CRUAUD, U. JOGER, AND Z.T. NAGY. 2008. Dissecting the major African snake radiation: a molecular phylogeny of the Lamprophiidae Fitzinger (Serpentes, Caenophidia). *Zootaxa*, 1945:51–66.
- VISSER, J. 1981. Additional records and corrections for the Cape Province. *Journal of the Herpetological Association of Africa*, 25:6–8.
- WAGNER, P., A.M. BAUER, T.M. WILMS, M. BARTS, AND M. BÖHME. 2012. Miscellanea Accrodontia: notes on nomenclature, taxonomy and distribution. *Russian Journal of Herpetology*, 19(2):177–189.
- WAGNER, P., W. BÖHME, O.S.G. PAUWELS, AND A. SCHMITZ. 2009. A review of the African red-flanked skinks of the *Lygosoma fernandi* (Burton, 1836) species group (Squamata: Scincidae) and the role of climate change in their speciation. *Zootaxa*, 2050:1–30.
- WAGNER, P., D.G. BROADLEY, AND A.M. BAUER. 2012. A new acontine skink from Zambia (Scincidae: *Acontias* Cuvier, 1817). *Journal of Herpetology*, 46:494–502.
- WAGNER, P., E. GREENBAUM, A.M. BAUER, C. KUSAMBA, AND A.D. LEACHÉ. 2018. Lifting the blue-headed veil – integrative taxonomy of the *Acanthocercus atricollis* species complex (Squamata: Agamidae). *Journal of Natural History*, 52:771–817.
- WAGNER, P., D. RÖDDER, AND T.M. WILMS. 2012. New data on the morphology and natural history of *Tetradactylus ellenbergeri* (Angel, 1922) (Sauria: Gerrhosauridae) and *Trachylepis ivensii* (Bocage, 1879) (Sauria: Scincidae) in northeastern Zambia. *Bonn Zoological Bulletin*, 61(1):35–40.
- WAGNER, P., T.M. WILMS, D., RÖDDER, AND A. SCHMITZ. 2013. A great leap – the first record of *Xenopus pygmaeus* (Anura: Pipidae) from south of the Congo Basin. *Salamandra*, 49(4):206–210.
- WAKE, D.B., AND V.T. VREDENBURG. 2008. Are we in the midst of the sixth mass extinction? A view from the world of amphibians. *Proceedings of the National Academy of Sciences of the United States*, 105: 11466–11473.
- WALLACH V., K.L. WILLIAMS, AND J. BOUNDY. 2014. *Snakes of the World: A Catalogue of Living and Extinct Species*. CRC Press, Boca Raton, Florida, USA. xxvi + [2] + 1209 pp.
- WALLACH, V., W. WÜSTER, AND D.G. BROADLEY. 2009. In praise of subgenera: taxonomic status of cobras of the genus *Naja* Laurenti (Serpentes: Elapidae). *Zootaxa*, 2236:26–36.
- WASONGA, D.V., AND A. CHANNING. 2013. Identification of sand frogs (Anura: Pyxicephalidae: *Tomopterna*) from Kenya with the description of two new species. *Zootaxa*, 3734:221–240.
- WEINELL, J.L., AND A.M. BAUER. 2018. Systematics and phylogeography of the widely distributed african skink *Trachylepis varia* species complex. *Molecular Phylogenetics and Evolution*, 120:103–117.

- WEIR, C.R., T. RON, M. MORAIS, AND A.D.C. DUARTE. 2007. Nesting and at-sea distribution of marine turtles in Angola, West Africa, 2000–2006: Occurrence, threats and conservations implications. *Oryx*, 41(2):224–231.
- WELDON, C., L.H. DU PREEZ, A.D. HYATT, R. MULLER, AND R. SPEARE. 2004. Origin of the amphibian chytrid fungus. *Emerging Infectious Diseases*, 10:2100–2105.
- WERMUTH, H., AND R. MERTENS. 1977. Liste der Rezenten Amphibien und Reptilien. Testudines, Crocodylia, Rhynchocephalia. *Das Tierreich*, 100. Walter de Gruyter, Berlin, Germany. xxvii + 174 pp.
- WERNER, F. 1897. Über Reptilien und Batrachier aus Togoland, Kamerun und Tunis aus dem Kgl. Museum für Naturkunde in Berlin. I. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien*, 47:395–408.
- WERNER, F. 1902. Über westafrikanische Reptilien. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien*, 52:332–348.
- WERNER, F. 1908 “1907.” Ergebnisse der mit Subvention aus der Erbschaft Treitl unternommenen zoologischen Forschungsreise Dr. Franz Werner’s nach dem ägyptischen Sudan und Nord-Uganda. XII. Die Reptilien und Amphibien. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe*, 116:1823–1926, pls. 1–4.
- WERNER, F. 1910. Reptilia et Amphibia. Pages 279–370 in L. Schultze, Zoologische und anthropologische Ergebnisse einer Forschungsreise im westlichen und zentralen Südafrika. IV. *Denkschriften der Medicinisch-naturwissenschaftliche Gesellschaft zu Jena*, 16.
- WHEELER, A. (1958) The Gronovius fish collection: a catalogue and historical account. *Bulletin of the British Museum (Natural History), Historical Series*, 1:185–249, pls. 26–34.
- WIECZOREK, A.M., R.C. DREWES, AND A. CHANNING. 2000. Biogeography and evolutionary history of *Hyperolius* species: application of molecular phylogeny. *Journal of Biogeography*, 27:1231–1243.
- WINTER, M., W. FIEDLER, W.N. HOCHACHKA, A. KOEHNCKE, S. MEIRI, AND I. DE LA RIVA. 2016. Patterns and biases in climate change research on apmphibians and reptiles: a systematic review. *Royal Society Open Science*, 3(9):160158. DOI: 10.1098/rsos.160158.
- WONG, R.A., J.J FONG, AND T.J. PAPENFUSS. 2010. Phylogeography of the African helmeted terrapin, *Pelomedusa subrufa*: genetic structure, dispersal, and human introduction. *Proceedings of the California Academy of Sciences*, Series 4, 61:575–585.
- WOODRUFF, D.S. 1973. Natural hybridization and hybrid zones. *Systematic Zoology*, 22:213–218.
- WÜSTER, W., S. CROOKES, I. INEICH, Y. MANÉ, C.E. POOK, J.-F. TRAPE, AND D.G. BROADLEY. 2007. The phylogeny of cobras inferred from mitochondrial DNA sequences: Evolution of venom spitting and the phylogeography of the African spitting cobras (Serpentes: Elapidae: *Naja nigricollis* complex). *Molecular Phylogenetics and Evolution*, 45:437–453.
- ZIMKUS, B.M., AND J.G. LARSON. 2011. Examination of the molecular relationships of sand frogs (Anura: Pyxicephalidae: *Tomopterna*) and resurrection of two species from the Horn of Africa. *Zootaxa*, 2933:27–45.
- ZIMKUS, B.M., AND S. SCHICK. 2010. Light at the end of the tunnel: insights into the molecular systematics of East African puddle frogs (Anura: Phrynobatrachidae). *Systematics and Biodiversity*, 8:39–47.
- ZIMKUS, B.M., L.P. LAWSON, M.F. BAREJ, C.D. BARRATT, A. CHANNING, K.M. DASH, J.M. DEHLING, L. DU PREEZ, P.-S. GEHRING, E. GREENBAUM, V. GOVZDIK, J. HARVEY, J. KIELGAST, C. KUSAMBA, Z.T. NAGY, M. PABUAN, J. PENNER, M.-O. RÖDEL, M. VENCES, AND S. LÖTTERS. 2017. Leapfrogging into new territory: How Mascarene ridged frogs diversified across Africa and Madagascar to maintain their ecological niche. *Molecular Phylogenetics and Evolution*, 106:254–269.

ADDENDUM

As noted in the introduction to this contribution, a limit of December 2017 was placed on published data included herein. In a few cases 2018 references are included because they appeared online or in early view in 2017, but definitive, paginated versions did not appear until after the end of the year (e.g., Broadley et al. 2018; Weinell and Bauer, 2018). However, in the time between the original submission and final acceptance of this manuscript several additional papers relating to the composition and distribution of the Angolan herpetofauna have been published or are in press and may appear in advance of the present atlas. Although many more publications will follow in short order and this work will soon be out of date, we thought it useful to note at least those of which we are aware.

- BAPTISTA, N., T. ANTÓNIO, AND W.R. BRANCH. 2018. Amphibians and reptiles of the Tundavala region of the Angolan Escarpment. *Biodiversity & Ecology* 6:397–403.
- CERÍACO, L.M.P., S. BANDEIRA, M.P. MARQUES, I. AGARWAL, E.L. STANLEY, A.M. BAUER, M.P. HEINICKE, AND D.C. BLACKBURN. 2018. A new earless species of *Poyntonophrynus* (Anura: Bufonidae) from the Serra da Neve Inselberg, Namibe Province, Angola. *ZooKeys* 780:109–136.
- CERÍACO, L.M.P., S.D.A.C DE SÁ, AND A.M. BAUER. 2018. The genus *Osteolaemus* (Crocodylidae) in Angola and a new southernmost record for the genus. *Herpetology Notes* 11:337–341.
- CERÍACO, L.M.P., M.P. MARQUES, S. BANDEIRA, D.C. BLACKBURN, AND A.M. BAUER. In press. Herpetological survey of Cangandala National Park, with a synoptic list of the amphibians and reptiles of Malanje Province, Central Angola. *Herpetological Review*.
- PORTILLO, F., W.R. BRANCH, W. CONRADIE, M.-O. RÖDEL, J. PENNER, M. BAREJ, C. KUSAMBA, W. MUNINGA, M. ARISTOTE, A.M. BAUER, J.-F. TRAPE, Z. NAGY, P. CARLINO, O. PAUWELS, M. MENEGON, M. BURGER, T. MAZUCH, K. JACKSON, D. HUGHES, M. BEHANGANA, A.-G. ZASSI-BOULOU, A.-G., AND E. GREENBAUM. 2018. Phylogeny and biogeography of the African burrowing snake subfamily Aparallactinae (Squamata: Lamprophiidae). *Molecular Phylogenetics and Evolution* 127:288–303.

**Diversity and Distribution of the Amphibians and Terrestrial
Reptiles of Angola:
Atlas of historical and bibliographic records (1840–2017)**

APPENDIX

TABLE A1. Checklist of Amphibians and Reptiles recorded for Angola. (IUCN RL) Global status according to the IUCN Red List of Threatened Species (2017): “EN” Endangered, “VU” vulnerable, “LC” least concern, “DD” data deficient, “NE” not evaluated. Taxa listed as “—” are those for which uncertainties preclude inclusion in the current IUCN assessments.

Species/Subspecies	Common name	Endemicity	IUCN RL
ANURA Duméril, 1805			
Family PIPIDAE Gray, 1825			
Genus <i>Xenopus</i> Wagler, 1827			
<i>Xenopus andrei</i> Loumont, 1983	Andre’s Clawed Frog	—	LC
<i>Xenopus</i> cf. <i>epitropicalis</i> Fischberg, Colombelli and Picard, 1982	Congolese Clawed Frog	—	LC
<i>Xenopus muelleri</i> (Peters, 1844)	Müller’s Clawed Frog	—	LC
<i>Xenopus petersii</i> Bocage, 1895	Peters’ Clawed Frog	—	LC
<i>Xenopus poweri</i> Hewitt, 1927	Power’s Clawed Frog	—	NE
<i>Xenopus</i> sp.	—	—	-
Family BUFONIDAE Gray, 1825			
Genus <i>Mertensophryne</i> Tihen, 1960			
<i>Mertensophryne melanopleura</i> (Schmidt and Inger, 1959)	Dark-Sided Toad	—	LC
<i>Mertensophryne</i> aff. <i>mocquardi</i> (Angel, 1924)	Mocquard’s Toad	—	DD
Genus <i>Poyntonophrynus</i> Frost et al., 2006			
<i>Poyntonophrynus dombensis</i> (Bocage, 1895)	Dombe Toad	—	LC
<i>Poyntonophrynus grandisonae</i> (Poynton and Haacke, 1993)	Grandison’s Toad	Endemic	DD
<i>Poyntonophrynus kavangensis</i> (Poynton and Broadley, 1988)	Kavango Toad	—	LC
Genus <i>Schismaderma</i> Smith, 1849			
<i>Schismaderma carens</i> (Smith, 1848)	African Red Toad	—	LC
Genus <i>Sclerophrys</i> Tschudi, 1838			
<i>Sclerophrys buchneri</i> (Peters, 1882)	Buchner’s Toad	—	DD
<i>Sclerophrys funerea</i> (Bocage, 1866)	Angolan Toad	—	LC
<i>Sclerophrys garmani</i> (Meek, 1897)	Garman’s Toad	—	LC
<i>Sclerophrys gutturalis</i> (Power, 1927)	Guttural Toad	—	LC
<i>Sclerophrys lemairii</i> (Boulenger, 1901)	Lemaire’s Toad	—	LC
<i>Sclerophrys poweri</i> (Hewitt, 1935)	Power’s Toad	—	LC
<i>Sclerophrys pusilla</i> (Mertens, 1937)	Mertens’ Striped Toad	—	LC
<i>Sclerophrys regularis</i> (Reuss, 1833)	African Common Toad	—	LC
Family MICROHYLIDAE Günther, 1858 (1843)			
Genus <i>Phrynomantis</i> Peters, 1867			
<i>Phrynomantis affinis</i> Boulenger, 1901	Spotted Rubber Frog	—	LC
<i>Phrynomantis annectans</i> Werner, 1910	Marbled Rubber Frog	—	LC
<i>Phrynomantis bifasciatus</i> (Smith, 1847)	Banded Rubber Frog	—	LC

Family BREVICIPITIDAE Bonaparte, 1850			
Genus <i>Breviceps</i> Merrem, 1820			
<i>Breviceps poweri</i> Parker, 1934	Power's Rain Frog	—	LC
<i>Breviceps</i> sp.	—	—	-
Family HEMISOTIDAE Cope, 1867			
Genus <i>Hemisis</i> Wagler, 1827			
<i>Hemisis guineensis</i> Cope, 1865	Guinea Snout-Burrower	—	LC
<i>Hemisis marmoratus</i> (Peters, 1854)	Marbled Snout-Burrower	—	LC
Family HYPEROLIIDAE Laurent, 1943			
Genus <i>Afrrixalus</i> Laurent, 1944			
<i>Afrrixalus dorsalis</i> (Peters, 1875)	Striped Spiny Reed Frog	—	LC
<i>Afrrixalus fulvovittatus</i> (Cope, "1860" 1861)	Four-Lined Spiny Reed Frog	—	LC
<i>Afrrixalus osorioi</i> (Ferreira, 1906)	Osorio's Spiny Reed Frog	—	LC
<i>Afrrixalus quadrivittatus</i> (Werner, 1908 "1907")	Four-Lined Spiny Reed Frog	—	LC
<i>Afrrixalus wittei</i> (Laurent, 1941)	de Witte's Spiny Reed Frog	—	LC
Genus <i>Cryptothylax</i> Laurent and Combaz, 1950			
<i>Cryptothylax greshofii</i> (Schilthuis, 1889)	Greshoff's Wax Frog	—	LC
Genus <i>Hyperolius</i> Rapp, 1842			
<i>Hyperolius adspersus</i> Peters, 1877	Sprinkled Long Reed Frog	—	LC
<i>Hyperolius angolensis</i> Steindachner, 1867	Angolan Reed Frog	—	LC
<i>Hyperolius benguellensis</i> (Bocage, 1893)	Benguela Long Reed Frog	—	LC
<i>Hyperolius bicolor</i> Ahl, 1931	Two-Colored Reed Frog	Endemic	DD
<i>Hyperolius bocagei</i> Steindachner, 1867	Bocage's Reed Frog	—	LC
<i>Hyperolius cheluaensis</i> Conradie, Branch, Measy and Tolley, 2012	Chela Mountain Reed Frog	Endemic	DD
<i>Hyperolius cinereus</i> Monard, 1937	Ashy Reed Frog	Endemic	LC
<i>Hyperolius cinnamomeoventris</i> Bocage, 1866	Cinnamon-Bellied Reed Frog	—	LC
<i>Hyperolius concolor</i> (Hallowell, 1844)	Variable Reed Frog	—	LC
<i>Hyperolius dartevellei</i> Laurent, 1943	Dartevelle's Reed Frog	—	LC
<i>Hyperolius fuscigula</i> Bocage, 1866	Brown-Throated Reed Frog	Endemic	DD
<i>Hyperolius glandicolor</i> Peters, 1878	Peters' Reed Frog	-	LC
<i>Hyperolius gularis</i> Ahl, 1931	Luanda Reed Frog	Endemic	DD
<i>Hyperolius kivuensis</i> Ahl, 1931	Kivu Reed Frog	—	LC
<i>Hyperolius langi</i> Noble, 1924	Lang's Reed Frog	—	LC
<i>Hyperolius maestus</i> Rochebrune, 1885	Cabinda Reed Frog	Endemic	DD
<i>Hyperolius nasutus</i> Günther, 1865	Large-Nosed Long Reed Frog	—	LC
<i>Hyperolius nitidulus</i> Peters, 1875	Plain Reed Frog	—	LC
<i>Hyperolius ocellatus</i> (Günther, 1858)	Golden-Eyed Reed Frog	—	LC
<i>Hyperolius platyceps</i> (Boulenger, 1900)	Benito River Reed Frog	—	LC
<i>Hyperolius polli</i> Laurent, 1943	Tshimbulu Reed Frog	—	DD

<i>Hyperolius protchei</i> Rochebrune, 1885	Rochebrune's Reed Frog	Endemic	DD
<i>Hyperolius pusillus</i> (Cope, 1862)	Water Lilly Reed Frog	—	LC
<i>Hyperolius quinquevittatus</i> Bocage, 1866	Five-Striped Reed Frog	—	LC
<i>Hyperolius raymondi</i> Conradie, Branch and Tolley, 2013	Raymond's Reed Frog	Endemic	DD
<i>Hyperolius rhizophilus</i> Rochebrune, 1885	African Reed Frog	Endemic	DD
<i>Hyperolius steindachneri</i> Bocage, 1866	Steindachner's Reed Frog	—	LC
<i>Hyperolius vilhenai</i> Laurent, 1964a	Vilhena's Reed Frog	Endemic	DD
Genus <i>Kassina</i> Girard, 1853			
<i>Kassina kuvangensis</i> (Monard, 1937)	Kuvangu Kassina	—	LC
<i>Kassina maculosa</i> (Sternfeld, 1917)	Marbled Running Frog	—	LC
<i>Kassina senegalensis</i> (Duméril and Bibron, 1841)	Senegal Kassina	—	LC
Family ARTHROLEPTIDAE Mivart, 1869			
Genus <i>Arthroleptis</i> Smith, 1849			
<i>Arthroleptis carquejai</i> Ferreira, 1906	Carqueja's Squeaker	Endemic	DD
<i>Arthroleptis lameerei</i> de Witte, 1921	Lameer's Squeaker	—	LC
<i>Arthroleptis spinalis</i> Boulenger, 1919	Tanganyika Screeching Frog	—	DD
<i>Arthroleptis stenodactylus</i> Pfeffer, 1893	Common Squeaker	—	LC
<i>Arthroleptis xenochirus</i> Boulenger, 1905	Plain Squeaker	—	LC
Genus <i>Leptopelis</i> Günther, 1859			
<i>Leptopelis anchietae</i> (Bocage, 1873)	Anchieta's Tree Frog	Endemic	LC
<i>Leptopelis aubryi</i> (Duméril, 1856)	Gabon Forest Treefrog	—	LC
<i>Leptopelis bocagii</i> (Günther, 1865)	Bocage's Tree Frog	—	LC
<i>Leptopelis cynamomeus</i> (Bocage, 1893)	Angola Forest Treefrog	—	LC
<i>Leptopelis jordani</i> Parker, 1936	Congulu Forest Treefrog	Endemic	DD
<i>Leptopelis marginatus</i> (Bocage, 1895)	Quissangue Forest Treefrog	Endemic	DD
<i>Leptopelis notatus</i> (Peters, 1875)	Common Forest Treefrog	—	LC
<i>Leptopelis viridis</i> (Günther, "1868" 1869)	Rusty Forest Treefrog	—	LC
Genus <i>Trichobatrachus</i> Boulenger, 1900			
<i>Trichobatrachus robustus</i> Boulenger, 1900	Hairy Frog	—	LC
Family PTYCHADENIDAE Dubois, 1987			
Genus <i>Hildebrandtia</i> Nieden, 1907			
<i>Hildebrandtia ornatissima</i> (Bocage, 1879)	Angola Ornate Frog	Endemic	DD
<i>Hildebrandtia ornata</i> (Peters, 1878)	Ornate Frog	—	LC
Genus <i>Ptychadena</i> Boulenger, 1917			
<i>Ptychadena anchietae</i> (Bocage, 1867)	Anchieta's Grass Frog	—	LC
<i>Ptychadena ansorgei</i> (Boulenger, 1905)	Ansorge's Grass Frog	—	LC
<i>Ptychadena bunoderma</i> (Boulenger, 1907)	Rough Grass Frog	—	LC

<i>Ptychadena grandisonae</i> Laurent, 1954	Grandison's Grass Frog	—	LC
<i>Ptychadena guibei</i> Laurent, 1954	Guibe's Grass Frog	—	LC
<i>Ptychadena keilingi</i> (Monard, 1937)	Keiling's Grass Frog	—	LC
<i>Ptychadena</i> cf. <i>mascareniensis</i> (Duméril and Bibron, 1841)	Mascarene Grass Frog	—	LC
<i>Ptychadena</i> cf. <i>mossambica</i> (Peters, 1854)	Mozambique Grass Frog	—	LC
<i>Ptychadena oxyrhynchus</i> (Smith, 1849)	Sharp-Nosed Grass Frog	—	LC
<i>Ptychadena perplicata</i> Laurent, 1964	Many-Ridged Grass Frog	—	LC
<i>Ptychadena porosissima</i> (Steindachner, 1867)	Striped Grass Frog	—	LC
<i>Ptychadena subpunctata</i> (Bocage, 1866)	Spotted Grass Frog	—	LC
<i>Ptychadena taenioscelis</i> Laurent, 1954	Small Grass Frog	—	LC
<i>Ptychadena upembae</i> (Schmidt and Inger, 1959)	Upemba Grass Frog	—	LC
<i>Ptychadena uzungwensis</i> (Loveridge, 1932)	Udzungwa Grass Frog	—	LC
Family PHRYNOBATRACHIDAE Laurent, 1941			
Genus <i>Phrynobatrachus</i> Günther, 1862			
<i>Phrynobatrachus brevipalmatus</i> (Ahl, 1925 “1923”)	Ahl's Screeching Frog	Endemic	DD
<i>Phrynobatrachus cryptotis</i> Schmidt and Inger, 1959	Cryptic River Frog	—	DD
<i>Phrynobatrachus mababiensis</i> FitzSimons, 1932	Mababe Puddle Frog	—	LC
<i>Phrynobatrachus minutus</i> (Boulenger, 1895)	Ethiopian Dwarf Puddle Frog	—	LC
<i>Phrynobatrachus natalensis</i> (Smith, 1849)	Natal Dwarf Puddle Frog	—	LC
<i>Phrynobatrachus parvulus</i> (Boulenger, 1905)	Dwarf River Frog	—	LC
<i>Phrynobatrachus plicatus</i> (Günther, 1858)	Coast River Frog	—	LC
Family PYXICEPHALIDAE Bonaparte, 1850			
Genus <i>Amietia</i> Dubois, 1987			
<i>Amietia angolensis</i> (Bocage, 1866)	Angola River Frog	—	LC
Genus <i>Aubria</i> Boulenger, 1917			
<i>Aubria</i> sp.	—	—	NE
Genus <i>Pyxicephalus</i> Tschudi, 1838			
<i>Pyxicephalus edulis</i> Peters, 1854	Edible Bullfrog	—	LC
Genus <i>Tomopterna</i> Duméril and Bibron, 1841			
<i>Tomopterna cryptotis</i> (Boulenger, 1907)	Tremelo Sand Frog	—	LC
<i>Tomopterna damarensis</i> Dawood and Channing, 2002	Damaraland Sand Frog	—	DD
<i>Tomopterna krugerensis</i> Passmore and Carruthers, 1975	Knocking Sand Frog	—	LC
<i>Tomopterna tandyi</i> Channing and Bogart, 1996	Tandy's Sand Frog	—	LC

<i>Tomopterna tuberculosa</i> (Boulenger, 1882)	Rough Sand Frog	—	LC
Family DICROGLOSSIDAE Anderson, 1871			
Genus <i>Hoplobatrachus</i> Peters, 1863			
<i>Hoplobatrachus occipitalis</i> (Günther, 1858)	African Crowned Bullfrog	—	LC
Family RANIDAE Batsch, 1796			
Genus <i>Amnirana</i> Dubois, 1992			
<i>Amnirana albolabris</i> (Hallowell, 1856)	White-Lipped Frog	—	LC
<i>Amnirana darlingi</i> (Boulenger, 1902)	Darling's White-Lipped Frog	—	LC
<i>Amnirana lemairei</i> (de Witte, 1921)	Lemaire's White-Lipped Frog	—	LC
<i>Amnirana lepus</i> (Andersson, 1903)	Andersson's White-Lipped Frog	—	LC
<i>Amnirana parkeriana</i> (Mertens, 1938)	Parker's White-Lipped Frog	Endemic	DD
Family RHACOPHORIDAE Hoffman, 1932 (1858)			
Genus <i>Chiromantis</i> Peters, 1854			
<i>Chiromantis xerampelina</i> Peters, 1854	Grey Foam-Nest Treefrog	—	LC
REPTILIA			
ORDER CHELONII Brongniart, 1800			
Family CHELONIIDAE Oppel, 1811			
Genus <i>Caretta</i> Rafinesque, 1814			
<i>Caretta caretta</i> (Linnaeus, 1758)	Loggerhead Sea Turtle	—	EN
Genus <i>Chelonia</i> Brongniart, 1800			
<i>Chelonia mydas</i> (Linnaeus, 1758)	Green Sea Turtle	—	EN
Genus <i>Eretmochelys</i> Fitzinger, 1843			
<i>Eretmochelys imbricata</i> (Linnaeus, 1766)	Hawksbill Sea Turtle	—	CR
Genus <i>Lepidochelys</i> Fitzinger, 1843			
<i>Lepidochelys olivacea</i> (Eschscholtz, 1829)	Olive Ridley Sea Turtle	—	VU
Family DERMOCHELYIDAE Fitzinger, 1843			
Genus <i>Dermochelys</i> Blainville, 1816			
<i>Dermochelys coriacea</i> (Vandelli, 1761)	Leatherback Sea Turtle	—	VU
Family PELOMEDUSIDAE Cope, 1868			
Genus <i>Pelomedusa</i> Wagler, 1830			
<i>Pelomedusa subrufa</i> (Bonnaterre, 1789)	Helmeted Terrapin	—	NE
Genus <i>Pelusios</i> Wagler, 1830			
<i>Pelusios bechuanicus</i> FitzSimons, 1932	Okavango Mud Turtle	—	NE
<i>Pelusios castaneus</i> (Schweigger, 1812)	West African Mud Turtle	—	NE
<i>Pelusios chapini</i> Laurent, 1965	Central African Mud Turtle	—	NE
<i>Pelusios gabonensis</i> (Duméril, 1856)	African Forest Turtle	—	NE
<i>Pelusios nanus</i> Laurent, 1956	African Dwarf Mud Turtle	—	NE
<i>Pelusios rhodesianus</i> Hewitt, 1927	Variable Mud Turtle	—	LC

Family TESTUDINIDAE Batsch, 1788			
Genus <i>Cycloderma</i> Peters, 1854			
<i>Cycloderma aubryi</i> (Duméril, 1856)	Aubry's Softshell Turtle	—	NE
Genus <i>Kinixys</i> Bell, 1827			
<i>Kinixys belliana</i> Gray, 1831	Bell's Hinge-Back Tortoise	—	NE
<i>Kinixys erosa</i> (Schweigger, 1812)	Forest Hinge-Back Tortoise	—	DD
<i>Kinixys spekii</i> Gray, 1863	Speke's Hinge-Back Tortoise	—	NE
Genus <i>Stigmochelys</i> Gray, 1873			
<i>Stigmochelys pardalis</i> (Bell, 1828)	Leopard Tortoise	—	LC
Family TRIONYCHIDAE Fitzinger, 1826			
Genus <i>Cycloderma</i> Peters, 1854			
<i>Cycloderma aubryi</i> (Duméril, 1856)	Aubry's Softshell Turtle	—	VU
Genus <i>Trionyx</i> Geoffroy Saint-Hilaire, 1809			
<i>Trionyx triunguis</i> (Forskål, 1775)	African Softshell Turtle	—	VU
Order CROCODYLIA Gmelin, 1789			
Family CROCODYLIDAE Cuvier, 1808			
Genus <i>Crocodylus</i> Laurenti, 1768			
<i>Crocodylus niloticus</i> Laurenti, 1768	Nile Crocodile	—	LC
Genus <i>Mecistops</i> Gray, 1844			
<i>Mecistops</i> cf. <i>cataphractus</i> (Cuvier, 1825)	West African Slender-Snouted Crocodile	—	CE
Genus <i>Osteolaemus</i> Cope, 1861			
<i>Osteolaemus tetraspis</i> Cope, 1861	African Dwarf Crocodile	—	VU
ORDER SQUAMATA Oppel, 1811			
Family GEKKONIDAE Gray, 1825			
Genus <i>Afroedura</i> Loveridge, 1944			
<i>Afroedura bogerti</i> complex Loveridge, 1944	Bogert's Rock Gecko	—	NE
Genus <i>Afrogecko</i> Bauer, Good and Branch, 1997			
<i>Afrogecko ansorgii</i> (Boulenger, 1907)	Ansorge's Gecko	Endemic	NE
Genus <i>Chondrodactylus</i> Peters, 1870			
<i>Chondrodactylus fitzsimonsi</i> (Loveridge, 1947)	Button-Scaled Thick-Toed Gecko	—	NE
<i>Chondrodactylus laevigatus</i> (Fischer 1888)	Button-Scaled Gecko	—	NE
<i>Chondrodactylus pulitzerae</i> (Schmidt, 1933)	Pulitzer's Thick-Toed Gecko	—	NE
Genus <i>Hemidactylus</i> Oken, 1817			
<i>Hemidactylus angulatus</i> complex Hallowell, 1852	African Tropical Gecko	—	NE
<i>Hemidactylus bayonii</i> Bocage, 1893	Bayão's Gecko	Endemic	NE
<i>Hemidactylus benguellensis</i> Bocage, 1893	Benguela Gecko	Endemic	NE
<i>Hemidactylus longicephalus</i> Bocage, 1873	Long-Headed Tropical Gecko	—	NE
<i>Hemidactylus mabouia</i> (Moreau De Jonnés, 1818)	Tropical House Gecko	—	NE
<i>Hemidactylus</i> cf. <i>muriceus</i> Peters, 1870	Guinean Spiny Tropical Gecko	—	NE

Genus <i>Kolekanos</i> Heinicke, Daza, Greenbaum, Jackman and Bauer, 2014			
<i>Kolekanos plumicaudus</i> (Haacke, 2008)	Feather-Tailed Gecko	Endemic	NE
Genus <i>Lygodactylus</i> Gray, 1864			
<i>Lygodactylus angolensis</i> Bocage, 1896	Angola Dwarf Gecko	—	NE
<i>Lygodactylus bradfieldi</i> Hewitt, 1932	Bradfield's Dwarf Gecko	—	NE
<i>Lygodactylus capensis</i> (Smith, 1849)	Cape Dwarf Gecko	—	NE
<i>Lygodactylus chobiensis</i> FitzSimons, 1932	Okavango Dwarf Gecko	—	LC
<i>Lygodactylus lawrencei</i> Hewitt, 1926	Lawrence's Dwarf Gecko	—	NE
Genus <i>Pachydactylus</i> Wiegmann, 1834			
<i>Pachydactylus angolensis</i> Loveridge, 1944	Angolan Thick-Toed Gecko	Endemic	NE
<i>Pachydactylus caraculicus</i> FitzSimons, 1959	Angola Banded Thick-Toed Gecko	—	NE
<i>Pachydactylus oreophilus</i> complex McLachlan and Spence, 1967	Kaokoland Rock Gecko	—	NE
<i>Pachydactylus punctatus</i> complex Peters, 1854	Speckled Thick-Toed Gecko	—	NE
<i>Pachydactylus rangei</i> (Andersson, 1908)	Namib Web-Footed Gecko	—	LC
<i>Pachydactylus scherzi</i> Mertens, 1954	Scherz's Thick-Toed Gecko	—	NE
<i>Pachydactylus scutatus</i> Hewitt, 1927	Scaly Thick-Toed Gecko	—	NE
<i>Pachydactylus vanzyli</i> (Steyn and Haacke, 1966)	Namib Desert Gecko	—	NE
<i>Pachydactylus wahlbergii</i> (Peters, 1869)	Wahlberg's Kalahari Gecko	—	NE
Genus <i>Rhoptropus</i> Peters, 1869			
<i>Rhoptropus afer</i> Peters, 1869	Namib Day Gecko	—	NE
<i>Rhoptropus barnardi</i> Hewitt, 1926	Barnard's Namib Day Gecko	—	NE
<i>Rhoptropus benguellensis</i> Mertens, 1938	Benguela Namib Day Gecko	Endemic	NE
<i>Rhoptropus biporosus</i> FitzSimons, 1957	Fitzsimons' Namib Day Gecko	—	NE
<i>Rhoptropus boultoni</i> Schmidt, 1933	Boulton's Namib Day Gecko	—	NE
<i>Rhoptropus montanus</i> Laurent, 1964	Mountain Namib Day Gecko	Endemic	NE
<i>Rhoptropus taeniosictus</i> Laurent, 1964	Angolan Namib Day Gecko	Endemic	NE
<i>Rhoptropus</i> sp.	—	Endemic	-
Family AMPHISBAENIDAE Gray, 1825			
Genus <i>Dalophia</i> Gray, 1865			
<i>Dalophia angolensis</i> Gans, 1976	Angolan Worm Lizard	—	NE
<i>Dalophia ellenbergeri</i> (Angel, 1920)	Ellenberger's Worm Lizard	—	NE
<i>Dalophia pistillum</i> (Boettger, 1895)	Blunt-Tailed Worm Lizard	—	NE
Genus <i>Monopeltis</i> Smith, 1848			
<i>Monopeltis anchietae</i> (Bocage, 1873)	Anchieta's Worm Lizard	—	LC
<i>Monopeltis infuscata</i> Broadley, 1997	Infusate Wedge-Snouted Worm Lizard	—	NE
<i>Monopeltis luandae</i> Gans, 1976	Luanda Worm Lizard	Endemic	NE

<i>Monopeltis perplexus</i> Gans, 1976	Wedge-Snouted Worm Lizard	Endemic	NE
<i>Monopeltis vanderysti</i> de Witte, 1922	Vanderyst's Worm Lizard	—	NE
<i>Monopeltis welwitschii</i> (Gray, 1865)	Welwitsch's Worm Lizard	Endemic	NE
Genus <i>Zygaspis</i> Cope, 1885			
<i>Zygaspis nigra</i> Broadley and Gans, 1969	Black Round-Snouted Worm Lizard	—	LC
<i>Zygaspis quadrifrons</i> (Peters, 1862)	Kalahari Round-Snouted Worm Lizard	—	NE
Family LACERTIDAE Bonaparte, 1831			
Genus <i>Heliobolus</i> Fitzinger, 1843			
<i>Heliobolus lugubris</i> (Smith, 1838)	Bushveld Lizard	—	NE
Genus <i>Holaspis</i> Gray, 1863			
<i>Holaspis guentheri</i> Gray, 1863	Blue-Tailed Tree Lizard	—	NE
Genus <i>Ichnotropis</i> Peters, 1854			
<i>Ichnotropis bivittata bivittata</i> Bocage, 1866	Angolan Rough-Scaled Lizard	—	NE
<i>Ichnotropis bivittata pallida</i> Laurent, 1964	Pale Rough-Scaled Lizard	Endemic	NE
<i>Ichnotropis capensis capensis</i> (Smith, 1838)	The Cape Rough-Scaled Lizard	—	NE
<i>Ichnotropis capensis overlaeti</i> de Witte and Laurent, 1942	Lunda Rough-Scaled Lizard	Endemic	NE
<i>Ichnotropis microlepidota</i> Marx, 1956	Marx's Rough-Scaled Lizard	Endemic	NE
Genus <i>Meroles</i> Gray, 1838			
<i>Meroles anchietae</i> (Bocage, 1867)	Anchieta's Dune Lizard	—	NE
<i>Meroles reticulatus</i> (Bocage, 1867)	Reticulate Sand Lizard	—	NE
<i>Meroles squamulosus</i> (Peters, 1854)	Common Rough-Scaled Lizard	—	NE
Genus <i>Nucras</i> Gray, 1838			
<i>Nucras scalaris</i> Laurent, 1964	Scaled Sandveld Lizard	Endemic	DD
<i>Nucras</i> aff. <i>tessellata</i> (Smith, 1838)	Western Sandveld Lizard	—	-
Genus <i>Pediopalmis</i> Fitzinger, 1843			
<i>Pediopalmis benguellensis</i> (Bocage, 1867)	Bocage's Sand Lizard	—	NE
<i>Pediopalmis haackei</i> Conradie, Measey, Branch and Tolley, 2012	Haacke's Sand Lizard	Endemic	NE
<i>Pediopalmis huntleyi</i> Conradie, Measey, Branch and Tolley, 2012	Huntley's Sand Lizard	Endemic	NE
Family CORDYLIDAE Mertens, 1937			
Genus <i>Chamaesaura</i> Schneider, 1801			
<i>Chamaesaura anguina oligopholis</i> Laurent, 1964	Angolan Snake Lizard	—	NE
<i>Chamaesaura miopropus</i> Boulenger, 1894	Zambian Snake Lizard	—	NE
Genus <i>Cordylus</i> Laurenti, 1768			
<i>Cordylus angolensis</i> (Bocage, 1895)	Angolan Girdled Lizard	Endemic	NE
<i>Cordylus machadoi</i> Laurent, 1964	Machado's Girdled Lizard	—	NE
<i>Cordylus namakuiyus</i> Stanley, Ceríaco, Bandeira, Valério, Bates and Branch, 2016	Kaokoveld Girdled Lizard	Endemic	NE

Family GERRHOSAUROIDAE Fitzinger, 1843			
Genus <i>Cordylus</i> Gray, 1865 [1866]			
<i>Cordylus subcaeruleus</i> (Smith 1844)	Dwarf Plated Lizard	—	LC
Genus <i>Gerrhosaurus</i> Wiegmann, 1828			
<i>Gerrhosaurus auritus</i> Boettger, 1887	Kalahari Plated Lizard	—	NE
<i>Gerrhosaurus bulsi</i> Laurent, 1954	Laurent's Plated Lizard	—	NE
<i>Gerrhosaurus multilineatus</i> Bocage, 1866	Kwanza Keeled Plated Lizard	Endemic	NE
<i>Gerrhosaurus</i> cf. <i>nigrolineatus</i> Hallowell, 1857	Black-Lined Plated Lizard	—	NE
<i>Gerrhosaurus skoogi</i> Andersson, 1916	Desert Plated Lizard	—	LC
Genus <i>Matobosaurus</i> Bates and Tolley, 2013			
<i>Matobosaurus maltzahnii</i> (de Grys, 1938)	Western Giant Plated Lizard	—	NE
Genus <i>Tetradactylus</i> Merrem, 1820			
<i>Tetradactylus ellenbergeri</i> (Angel, 1922)	Ellenberger's Plated Snake-Lizard	—	NE
Family SCINCIDAE Gray, 1825			
Genus <i>Acontias</i> Cuvier, 1816 [1817]			
<i>Acontias jappi</i> (Broadley, 1968)	Barotseland Blind Legless Skink	—	NE
<i>Acontias kgalagadi</i> Lamb, Biswas and Bauer, 2010	Kalahari Legless Skink	—	NE
<i>Acontias occidentalis</i> FitzSimons, 1941	Savanna Legless Skink	—	LC
Genus <i>Eumecia</i> Bocage, 1870			
<i>Eumecia anchietae anchietae</i> Bocage, 1870	Western Serpentineform Skink	—	NE
<i>Eumecia anchietae major</i> Laurent, 1964	Major Western Serpentineform Skink	Endemic	NE
Genus <i>Feylinia</i> Gray, 1845			
<i>Feylinia currouri</i> Gray, 1845	Western Forest Feylinia	—	NE
<i>Feylinia elegans</i> (Hallowell, 1852)	Elegant Feylinia	—	NE
<i>Feylinia grandisquamis</i> Müller, 1910	Large-Scaled Feylinia	—	NE
Genus <i>Lepidothyris</i> Cope, 1892			
<i>Lepidothyris hinkeli joi</i> Wagner, Böhme, Pauwels and Schmitz, 2009	Joe's Red-Flanked Skink	—	NE
Genus <i>Leptosiphos</i> Schmidt, 1943			
<i>Leptosiphos dewitsei</i> (Loveridge, 1934)	de Witte's Five-Toed Skink	—	NE
Genus <i>Lubaya</i> Horton, 1972			
<i>Lubaya ivensii</i> (Bocage, 1879)	Ivens' Skink	—	NE
Genus <i>Melanoseps</i> Boulenger, 1897			
<i>Melanoseps occidentalis</i> (Peters, 1877)	Western Limbless Skink	—	NE
Genus <i>Mochlus</i> Günther, 1864			
<i>Mochlus sundevallii</i> (Smith, 1849)	Sundevall's Writhing Skink	—	LC
Genus <i>Panaspis</i> Cope, 1868			
<i>Panaspis brevicauda</i> (Peters, 1873)	Peters' Snake-Eyed Skink	—	NE

<i>Panaspis cabindae</i> (Bocage, 1866)	Cabinda Snake-Eyed Skink	—	DD
<i>Panaspis maculicollis</i> Jacobsen and Broadley, 2000	Speckle-Lipped Snake-Eyed Skink	—	NE
<i>Panaspis</i> aff. <i>wahlbergii</i> (Smith, 1849)	Wahlberg’s Snake-Eyed Skink	—	NE
Genus <i>Sepsina</i> Bocage, 1866			
<i>Sepsina angolensis</i> Bocage, 1866	Angolan Reduced-Limb Skink	—	NE
<i>Sepsina bayoni</i> (Bocage, 1866)	Bayão’s Reduced-Limb Skink	—	NE
<i>Sepsina copei</i> Bocage, 1873	Cope’s Reduced-Limb Skink	Endemic	NE
Genus <i>Trachylepis</i> Fitzinger, 1843			
<i>Trachylepis acutilabris</i> (Peters, 1862)	Wedge-Snouted Skink	—	NE
<i>Trachylepis affinis</i> (Gray, 1838)	Senegal Skink	—	NE
<i>Trachylepis</i> cf. <i>albopunctata</i> (Bocage, 1867)	Angolan Variable Skink	—	NE
<i>Trachylepis bayonii</i> (Bocage, 1872)	Bayão’s Skink	—	DD
<i>Trachylepis binotata</i> (Bocage, 1867)	Ovambo Tree Skink	—	NE
<i>Trachylepis bocagii</i> (Boulenger, 1887)	Bocage’s Skink	—	LC
<i>Trachylepis chimbana</i> (Boulenger, 1887)	Chimban Skink	—	NE
<i>Trachylepis damarana</i> (Peters, 1870)	Kalahari Variable Skink	—	NE
<i>Trachylepis hoeschi</i> (Mertens, 1954)	Hoesch’s Skink	—	NE
<i>Trachylepis</i> cf. <i>lacertiformis</i> (Peters, 1854)	Bronze Rock Skink	—	LC
<i>Trachylepis laevis</i> (Boulenger, 1907)	Angolan Blue-Tailed Skink	—	NE
<i>Trachylepis maculilabris</i> (Gray, 1845)	Speckle-Lipped Skink	—	NE
<i>Trachylepis</i> cf. <i>megahura</i> (Peters, 1878)	Grass-Top Skink	—	NE
<i>Trachylepis monardi</i> nom. nov. Marques, Ceriaco, Blackburn and Bauer	Monard’s Skink	Endemic	NE
<i>Trachylepis occidentalis</i> (Peters, 1867)	Western Three-Striped Skink	—	NE
<i>Trachylepis punctulata</i> (Bocage, 1872)	Speckled Sand Skink	—	NE
<i>Trachylepis spilogaster</i> (Peters, 1882)	Kalahari Tree Skink	—	NE
<i>Trachylepis sulcata</i> (Peters, 1867)	Western Rock Skink	—	NE
<i>Trachylepis wahlbergii</i> (Peters, “1869” 1870)	Wahlberg’s Striped Skink	—	NE
Genus <i>Typhlacontias</i> Bocage, 1873			
<i>Typhlacontias johnsonii</i> Andersson, 1916	Johnson’s Burrowing Skink	—	NE
<i>Typhlacontias punctatissimus bogertii</i> Laurent, 1964	Bogert’s Dotted Blind Dart Skink	Endemic	NE
<i>Typhlacontias punctatissimus punctatissimus</i> Bocage, 1873	Dotted Blind Dart Skink	—	NE
<i>Typhlacontias rohani</i> Angel, 1923	Rohan’s Blind Dart Skink	—	NE
<i>Typhlacontias rudebecki</i> Haacke, 1997	Rudebeck’s Blind Dart Skink	Endemic	NE

Family VARANIDAE Hardwicke and Gray, 1824			
Genus <i>Varanus</i> Merrem, 1820			
<i>Varanus albigularis albigularis</i> (Daudin, 1802)	White-Throated Monitor	—	LC
<i>Varanus albigularis angolensis</i> Schmidt, 1933	Angolan White-Throated Monitor	—	LC
<i>Varanus niloticus</i> (Linnaeus, 1758)	Nile Monitor	—	LC
Family CHAMAELEONIDAE Gray, 1825			
Genus <i>Chamaeleo</i> Laurenti, 1768			
<i>Chamaeleo anchietae</i> Bocage, 1872	Anchieta's Chameleon	—	LC
<i>Chamaeleo dilepis quilensis</i> Bocage, 1886	Quilo Flap-Neck Chameleon	—	LC
<i>Chamaeleo gracilis etiennei</i> Schmidt, 1919	Etienne's Graceful Chameleon	—	LC
<i>Chamaeleo namaquensis</i> Smith, 1831	Namaqua Chameleon	—	LC
Genus <i>Trioceros</i> Swainson, 1839			
<i>Trioceros oweni</i> (Gray, 1831)	Owen's Chameleon	—	LC
Family AGAMIDAE Gray, 1827			
Genus <i>Acanthocercus</i> Fitzinger, 1843			
<i>Acanthocercus cyanocephalus</i> (Falk, 1925)	Angolan Tree Agama	—	LC
<i>Acanthocercus</i> sp.	—	—	NE
Genus <i>Agama</i> Daudin, 1802			
<i>Agama aculeata</i> Merrem, 1820	Western Ground Agama	—	LC
<i>Agama anchietae</i> Bocage, 1896	Anchieta's Agama	—	NE
<i>Agama congica</i> Peters, 1877	Congo Agama	—	NE
<i>Agama mucosoensis</i> Hellmich, 1957	Mucoso Agama	Endemic	NE
<i>Agama planiceps</i> Peters, 1862	Namib Rock Agama	—	NE
<i>Agama schacki</i> Mertens, 1938	Schack's Rock Agama	Endemic	NE
<i>Agama</i> sp.	—	Endemic	NE
SERPENTES			
Family TYPHLOPIDAE Merrem, 1820			
Genus <i>Afrotyphlops</i> Broadley and Wallach, 2009			
<i>Afrotyphlops angolensis</i> (Bocage, 1866)	Angola Blind Snake	—	NE
<i>Afrotyphlops anomalus</i> (Bocage, 1873)	Angolan Giant Blind Snake	Endemic	NE
<i>Afrotyphlops lineolatus</i> (Jan, 1864)	Common Lined Blind Snake	—	NE
<i>Afrotyphlops mucruso</i> (Peters, 1854)	Zambezi Blind Snake	—	NE
<i>Afrotyphlops schlegelii</i> (Bianconi, 1849)	Schlegel's Giant Blind Snake	—	NE
<i>Afrotyphlops schmidtii</i> (Laurent, 1956)	Schmidt's Blind Snake	—	NE
Genus <i>Letheobia</i> Cope, 1868			
<i>Letheobia praeocularis</i> (Stejneger, "1893" 1894)	Léopoldville Beaked Snake	—	LC

Family LEPTOTYPHLOPIDAE Stejneger, 1892			
Genus <i>Leptotyphlops</i> Fitzinger, 1843			
<i>Leptotyphlops kafubi</i> (Boulenger, 1919)	Shaba Thread Snake	—	NE
<i>Leptotyphlops scutifrons</i> (Peters, 1854)	Peters's Thread Snake	—	NE
Genus <i>Namibiana</i> Hedges, Adalsteinsson and Branch, 2009			
<i>Namibiana labialis</i> (Sternfeld, 1908)	Damara Thread Snake	—	NE
<i>Namibiana latifrons</i> (Sternfeld, 1908)	Benguela Thread Snake	—	NE
<i>Namibiana rostrata</i> (Bocage, 1886)	Angolan Beaked Thread Snake	Endemic	DD
Family PYTHONIDAE Fitzinger, 1826			
Genus <i>Python</i> Daudin, 1803			
<i>Python anchietae</i> Bocage, 1887	Anchieta's Dwarf Python	—	LC
<i>Python natalensis</i> Smith, 1840	Southern African Rock Python	—	NE
<i>Python sebae</i> (Gmelin, 1789)	African Rock Python	—	NE
Family BOIDAE Gray, 1825			
Genus <i>Calabaria</i> Gray, 1858			
<i>Calabaria reinhardtii</i> (Schlegel, 1851)	Calabar Ground Boa	—	NE
Family VIPERIDAE Oppel, 1811			
Genus <i>Atheris</i> Cope, 1862			
<i>Atheris squamigera</i> (Hallowell, "1844" 1845)	Variable Bush Viper	—	NE
Genus <i>Bitis</i> Gray, 1842			
<i>Bitis arietans</i> (Merrem, 1820)	Puff Adder	—	NE
<i>Bitis caudalis</i> (Smith, 1839)	Horned Adder	—	NE
<i>Bitis gabonica</i> Duméril, Bibron, and Duméril 1854	Gabon Adder	—	NE
<i>Bitis heraldica</i> (Bocage, 1889)	Angolan Adder	Endemic	NE
<i>Bitis nasicornis</i> (Shaw, 1792)	Rhinoceros Viper	—	NE
<i>Bitis peringueyi</i> (Boulenger, 1888)	Peringuey's Adder	—	LC
Genus <i>Causus</i> Wagler, 1830			
<i>Causus bilineatus</i> Boulenger, 1905	Two-Striped Night Adder	—	NE
<i>Causus lichtensteinii</i> (Jan, 1859)	Forest Night Adder	—	NE
<i>Causus maculatus</i> (Hallowell, 1842)	Spotted Night Adder	—	NE
<i>Causus resimus</i> (Peters, 1862)	Green Night Adder	—	NE
<i>Causus rhombeatus</i> (Lichtenstein, 1823)	Rhombic Night Adder	—	NE
Family LAMPROPHIIDAE Fitzinger, 1843			
Genus <i>Amblyodipsas</i> Peters, 1857			
<i>Amblyodipsas polylepis</i> (Bocage, 1873)	Common Purple-Glossed Snake	—	LC
Genus <i>Apparallactus</i> Smith, 1849			
<i>Apparallactus capensis</i> Smith, 1849	Cape Centipede Eater	—	LC
Genus <i>Atractaspis</i> Smith, 1849			
<i>Atractaspis bibronii</i> Smith, 1849	Bibron's Stiletto Snake	—	NE

<i>Atractaspis boulengeri</i> Mocquard, 1897	Boulenger's Stiletto Snake	—	NE
<i>Atractaspis congica</i> Peters, 1877	Congo Stiletto Snake	—	NE
<i>Atractaspis irregularis</i> (Reinhardt, 1843)	Variable Stiletto Snake	—	LC
<i>Atractaspis reticulata heterochilus</i> Boulenger, 1901	Reticulate Stiletto Snake	—	DD
Genus <i>Boaedon</i> Duméril, Bibron and Duméril, 1854			
<i>Boaedon angolensis</i> Bocage, 1895	Angolan House Snake	Endemic	NE
<i>Boaedon fuliginosus</i> complex (Boie, 1827)	Brown House Snake	—	NE
<i>Boaedon olivaceus</i> (Duméril, 1856)	Olive House Snake	—	NE
<i>Boaedon variegatus</i> (Bocage, 1867)	Variegated House Snake	Endemic	NE
Genus <i>Bothrophthalmus</i> Peters, 1863			
<i>Bothrophthalmus lineatus</i> Peters, 1863	Red-Black Striped Snake	—	NE
Genus <i>Dromophis</i> Schlegel, 1837			
<i>Dromophis lineatus</i> (Duméril, Bibron and Duméril, 1854)	Lined Olympic Snake	—	NE
Genus <i>Gonionotophis</i> Boulenger, 1893			
<i>Gonionotophis brussaui</i> (Mocquard, 1889)	Mocquard's File Snake	—	NE
Genus <i>Hemirhagerhis</i> Boettger, 1896			
<i>Hemirhagerhis viperina</i> (Bocage, 1873)	Western Bark Snake	—	NE
Genus <i>Hypoptophis</i> Boulenger 1908			
<i>Hypoptophis wilsonii</i> Boulenger, 1908	Wedge-Snouted Burrowing Snake	—	NE
Genus <i>Limaformosa</i> Broadley, Tolley, Conradie, Wishart, Trape, Burger, Kusamba, Zassi-Boulou, and Greenbaum, 2018			
<i>Limaformosa capensis</i> (Smith, 1847)	Southern File Snake	—	LC
<i>Limaformosa vernayi</i> (Bogert, 1940)	Angola File Snake	—	NE
Genus <i>Lycophidion</i> Fitzinger, 1843			
<i>Lycophidion hellmichi</i> Laurent, 1964	Hellmich's Wolf Snake	—	DD
<i>Lycophidion laterale</i> Hallowell, 1857	Flat Wolf Snake	—	NE
<i>Lycophidion meleagre</i> Boulenger, 1893	Speckeled Wolf Snake	—	NE
<i>Lycophidion multimaculatum</i> Boettger, 1888	Spotted Wolf Snake	—	NE
<i>Lycophidion ornatum</i> Parker, 1936	Ornate Wolf Snake	—	LC
Genus <i>Mehelya</i> Csiki, 1903			
<i>Mehelya poensis</i> (Smith, 1847)	Western Forest File Snake	—	NE
Genus <i>Polemon</i> Jan, 1858			
<i>Polemon collaris</i> (Peters, 1881)	Collared Snake-Eater	—	NE
Genus <i>Prosymna</i> Gray, 1849			
<i>Prosymna ambigua</i> Bocage, 1873	East African Shovel-Snout	—	LC
<i>Prosymna angolensis</i> Boulenger, 1915	Angola Shovel-Snout	—	LC
<i>Prosymna frontalis</i> (Peters, 1867)	South-Western African Shovel-Snout	—	LC
<i>Prosymna visseri</i> FitzSimons, 1959	Visser's Shovel-Snout	—	NE

Genus <i>Psammophis</i> Boie, 1825			
<i>Psammophis angolensis</i> (Bocage, 1872)	Dwarf Sand Snake	—	NE
<i>Psammophis ansorgii</i> Boulenger, 1905	Link-Marked Sand Racer	Endemic	NE
<i>Psammophis jallae</i> Peracca, 1896	Jalla's Sand Snake	—	NE
<i>Psammophis leopardinus</i> (Bocage, 1887)	Leopard Sand Snake	—	NE
<i>Psammophis mossambicus</i> Peters, 1882	Olive Whip Snake	—	NE
<i>Psammophis namibensis</i> Broadley, 1975	Namib Sand Snake	—	NE
<i>Psammophis notostictus</i> Peters, 1867	Karoo Sand Snake	—	NE
<i>Psammophis subtaeniatus</i> Peters, 1882	Stripe-Bellied Sand Snake	—	LC
<i>Psammophis trigrammus</i> Günther, 1865	Western Sand Snake	—	NE
<i>Psammophis zambiensis</i> Hughes and Wade, 2002	Zambian Whip Snake	—	NE
Genus <i>Psammophylax</i> Fitzinger, 1843			
<i>Psammophylax acutus</i> (Günther, 1888)	Striped Beaked Snake	—	NE
<i>Psammophylax rhombeatus ocellatus</i> (Bocage, 1873)	Spotted Skaapsteker	Endemic	NE
<i>Psammophylax tritaeniatus</i> (Günther, 1868)	Striped Skaapsteker	—	LC
Genus <i>Pseudaspis</i> Fitzinger, 1826			
<i>Pseudaspis cana</i> (Linnaeus, 1758)	Mole Snake	—	NE
Genus <i>Pythonodipsas</i> Günther, 1868			
<i>Pythonodipsas carinata</i> Günther, 1868	Western Keeled Snake	—	NE
Genus <i>Xenocalamus</i> Günther, 1868			
<i>Xenocalamus bicolor machadoi</i> Laurent, 1954	Machado's Quill-Snouted Snake	—	NE
<i>Xenocalamus mechowii inornatus</i> de Witte and Laurent, 1947	Inornate Elongate Quill-Snouted Snake	—	NE
<i>Xenocalamus mechowii mechowii</i> Peters, 1881	Elongate Quill-Snouted Snake	—	NE
Family ELAPIDAE Boie, 1827			
Genus <i>Aspidelaps</i> Fitzinger, 1843			
<i>Aspidelaps lubricus cowlesi</i> Bogert, 1940	Angolan Coral Snake	—	NE
Genus <i>Dendroaspis</i> Schlegel, 1848			
<i>Dendroaspis jamesoni</i> (Traill, 1843)	Jameson's Mamba	—	NE
<i>Dendroaspis polylepis</i> (Günther, 1864)	Black Mamba	—	LC
Genus <i>Elapsoidea</i> Bocage, 1866			
<i>Elapsoidea guentherii</i> Bocage, 1866	Günther's Garter Snake	—	NE
<i>Elapsoidea semiannulata moebiusi</i> (Werner, 1897)	Moebius' Garter Snake	—	NE
<i>Elapsoidea semiannulata semiannulata</i> Bocage, 1882	Angolan Garter Snake	—	NE

Genus <i>Naja</i> Laurenti, 1768			
<i>Naja anchietae</i> Bocage, 1879	Anchieta's Cobra	—	NE
<i>Naja amulata</i> Buchholz and Peters, 1876	Ringed Water Cobra	—	NE
<i>Naja melanoleuca</i> Hallowell, 1857	Forest Cobra	—	NE
<i>Naja mossambica</i> Peters, 1854	Mozambique Spitting Cobra	—	NE
<i>Naja multifasciata</i> Werner, 1902	Many-Banded Cobra	—	NE
<i>Naja nigricincta</i> Bogert, 1940	Western Barred Spitting Cobra	—	NE
<i>Naja nigricollis</i> Reinhardt, 1843	Black-Necked Spitting Cobra	—	NE
<i>Naja subfulva</i> Laurent, 1955	Savanna Cobra	—	NE
Genus <i>Pseudohaje</i> Günther, 1858			
<i>Pseudohaje goldii</i> (Boulenger, 1895)	African Tree Cobra	—	NE
Family COLUBRIDAE Oppel, 1811			
Genus <i>Chamaelycus</i> Boulenger, 1919			
<i>Chamaelycus parkeri</i> (Angel, 1934)	Parker's Banded Snake	—	NE
Genus <i>Crotaphopeltis</i> Fitzinger, 1843			
<i>Crotaphopeltis hotamboeia</i> (Laurenti, 1768)	Red-Lipped Snake	—	NE
Genus <i>Dasypeltis</i> Wagler, 1830			
<i>Dasypeltis palmarum</i> (Leach, 1818)	Palm Egg Eater	—	NE
<i>Dasypeltis scabra</i> (Linnaeus, 1758)	Common Egg Eater	—	LC
Genus <i>Dipsadoboa</i> Günther, 1858			
<i>Dipsadoboa shrevei</i> (Loveridge, 1932)	Shreve's Tree Snake	—	NE
Genus <i>Dispholidus</i> Duvernoy, 1832			
<i>Dispholidus typus typus</i> (Smith, 1828)	Boomslang	—	NE
<i>Dispholidus typus punctatus</i> Laurent, 1955	Spotted Boomslang	—	NE
Genus <i>Grayia</i> Günther, 1858			
<i>Grayia caesar</i> (Günther, 1863)	Caesar's African Water Snake	—	NE
<i>Grayia ornata</i> (Bocage, 1866)	Ornate African Water Snake	—	NE
<i>Grayia smythii</i> (Leach, 1818)	Smyth's African Water Snake	—	NE
<i>Grayia tholloni</i> Mocquard, 1897	Thollon's African Water Snake	—	NE
Genus <i>Hapsidophrys</i> Fischer, 1856			
<i>Hapsidophrys smaragdinus</i> (Schlegel, 1837)	Emerald Snake	—	NE
Genus <i>Hormonotus</i> Hallowell, 1857			
<i>Hormonotus modestus</i> (Duméril, Bibron and Duméril, 1854)	Uganda House Snake	—	NE
Genus <i>Lycodonomorphus</i> Lichtenstein, 1823			
<i>Lycodonomorphus subtaeniatus</i> Laurent, 1954	Eastern Congo White-Bellied Water Snake	—	LC
Genus <i>Mopaneveldophis</i> Figueroa, McKelvy, Grismer, Bell and Lailvaux, 2016			
<i>Mopaneveldophis zebrinus</i> (Broadley and Schätti, "1997" 1999)	Mopaneveld Snake	—	NE

Genus <i>Philothamnus</i> Smith, 1840			
<i>Philothamnus angolensis</i> Bocage, 1882	Angolan Green Snake	—	NE
<i>Philothamnus carinatus</i> (Andersson, 1901)	Thirteen-Scaled Green Snake	—	NE
<i>Philothamnus dorsalis</i> (Bocage, 1866)	Striped Green Snake	—	NE
<i>Philothamnus heterodermus</i> (Hallowell, 1857)	Emerald Green Snake	—	NE
<i>Philothamnus heterolepidotus</i> (Günther, 1863)	Slender Green Snake	—	NE
<i>Philothamnus hoplogaster</i> (Günther, 1863)	Southeastern Green Snake	—	NE
<i>Philothamnus nitidus loveridgei</i> Laurent, 1960	Loveridge's Green Bush Snake	—	NE
<i>Philothamnus ornatus</i> Bocage, 1872	Ornate Green Snake	—	NE
<i>Philothamnus semivariiegatus</i> (Smith, 1840)	Spotted Bush Snake	—	NE
Genus <i>Rhamnophis</i> Günther, 1862			
<i>Rhamnophis aethiopissa</i> Günther, 1862	Large-Eyed Green Tree Snake	—	NE
Genus <i>Scaphiophis</i> Peters, 1870			
<i>Scaphiophis albopunctatus</i> Peters, 1870	African Shovel-Nosed Snake	—	NE
Genus <i>Telescopus</i> Wagler, 1830			
<i>Telescopus finkeldeyi</i> Haacke, 2013	Damara Tiger Snake	—	NE
<i>Telescopus semiannulatus semiannulatus</i> Smith, 1849	Common Tiger Snake	—	NE
Genus <i>Thrasops</i> Hallowell, 1858			
<i>Thrasops flavigularis</i> (Hallowell, 1852)	Yellow-Throated Bold-Eyed Tree Snake	—	NE
<i>Thrasops jacksonii</i> Günther, 1895	Black Tree Snake	—	NE
Genus <i>Thelotornis</i> Smith, 1849			
<i>Thelotornis capensis oatesi</i> (Günther, 1881)	Oates' Twig Snake	—	LC
<i>Thelotornis kirtlandii</i> (Hallowell, 1844)	Forest Twig Snake	—	NE
Genus <i>Toxicodryas</i> Hallowell, 1857			
<i>Toxicodryas blandingii</i> (Hallowell, "1844" 1845)	Blanding's Tree Snake	—	NE
<i>Toxicodryas pulverulenta</i> (Fischer, 1856)	Fischer's Cat Snake	—	NE
Family NATRICIDAE Bonaparte, 1838			
Genus <i>Limnophis</i> Günther, 1865			
<i>Limnophis bangweolicus</i> (Mertens, 1936)	Bangweulu Water Snake	—	NE
<i>Limnophis bicolor</i> Günther, 1865	Bicolored Swamp Snake	—	NE
Genus <i>Natriciteres</i> Loveridge, 1953			
<i>Natriciteres bipostocularis</i> Broadley, 1962	Southwestern Forest Marsh Snake	—	NE
<i>Natriciteres olivacea</i> (Peters, 1854)	Olive Marsh Snake	—	LC

TABLE A2. Amphibian and reptile taxa that have been removed from the species list for Angola. This includes taxa that have undergone revision, resulting in name changes applicable to Angolan forms.

Species	References citing name	See account(s)
ANURA Duméril, 1805		
Family PIPIDAE Gray, 1825		
Genus <i>Xenopus</i> Wagler, 1827		
<i>Xenopus calcaratus</i> Peters, 1875	Peters (1877a:618).	<i>X. cf. epitropicalis</i>
<i>Xenopus fraseri</i> Boulenger, 1905	Laurent (1950a:13, 1954a:70), Cei (1977:16), Kobel (1981:120), Ruas (1996:20), Channing (2001:240), Frétey et al. (2011:22), Channing et al. (2012:294), Wagner et al. (2013:206), Ernst et al. (2015:147).	<i>Xenopus</i> sp.
<i>Xenopus (Xenopus) laevis</i> (Daudin, 1802)	Günther (1865a:480), Boulenger (1905:107), Monard (1937a:25, 1938:55, 76), Hellmich (1957a:22), Inger (1959:540), Kobel (1981:120), Gavetti and Andreone (1993:41), Frétey et al. (2011:22).	<i>X. petersii</i>
Family BUFONIDAE Gray, 1825		
Genus <i>Sclerophrys</i> Tschudi, 1838		
<i>Bufo</i> [= <i>Sclerophrys</i>] <i>guineensis</i> Günther, "1858" 1859	Peters (1877a:618), Bocage (1879b:89).	<i>Sclerophrys regularis</i>
<i>Bufo</i> [= <i>Amietophrynus</i> = <i>Sclerophrys</i>] <i>maculatus</i> Hallowell, 1854	Tandy and Keith (1972:159), Poynton and Broadley (1988:460), Channing (1989:1, 2001:84), Poynton and Haacke (1993:13), Ruas (1996:21, 2002:141), Pickersgill (2007a:541), Frétey et al. (2011:23). Frost (2016), Ceriaco et al. (2016a:19).	<i>Sclerophrys pusilla</i>
<i>Bufo</i> [= <i>Sclerophrys</i>] <i>pantherinus</i> Duméril and Bibron, 1841	Bocage (1866a:56).	<i>Sclerophrys regularis</i>
<i>Bufo</i> [= <i>Sclerophrys</i>] <i>spinatus</i> (Daudin, 1803)	Bocage (1867b:227), Loveridge (1936a:82).	<i>Sclerophrys gutturalis</i>
Family BREVICIPITIDAE Bonaparte, 1850		
Genus <i>Breviceps</i> Merrem, 1820		
<i>Breviceps adspersus</i> Peters, 1882	Poynton (1982:67, 1992: 68), Frost (1985:356, 2016), Channing (2001:213), Poynton and Broadley (1985a:523), Ruas (2002:142), du Preez and Carruthers (2009:108), Frétey et al. (2011:27), Conradie et al. (2016:11).	<i>Breviceps</i> sp.
<i>Breviceps gibbosus</i> (Linnaeus, 1758)	Bocage (1870:68, 1873b:227).	<i>Breviceps</i> sp.
<i>Breviceps mossambicus</i> Peters, 1854	Bocage (1895a:182), Parker (1934:194), Monard (1937a:29, 1938:56, 81), Hellmich (1957a:30), Loveridge (1957:357), Inger (1959:532), Laurent (1964a:156), Cei (1977:17, 18), Poynton (1982:67, 1992:68), Frost (1985:356, 2016), Gavetti and Andreone (1993:114), Ruas (1996:22), Channing (2001:213), du Preez and Carruthers (2009:108), Frétey et al. (2011:27), Ruas (2002:142).	<i>Breviceps</i> sp.
Family HEMISOTIDAE Cope, 1867		
Genus <i>Hemisus</i> Wagler, 1827		
<i>Hemisus guttatum</i> (Rapp, 1842)	Bocage (1895a:184), Monard (1938:56), Frade (1963:254).	<i>H. guineensis</i>

<i>Hemisus sudanense</i> Steindachner, 1864	Boulenger (1882:178).	<i>H. marmoratus</i>
Family HYPEROLIIDAE Laurent, 1943		
Genus <i>Afrixalus</i> Laurent, 1944		
<i>Megalixus</i> [= <i>Afrixalus</i>] <i>leptosomus</i> Peters, 1877	Boulenger (1882:129).	<i>Afrixalus quadrivittatus</i>
Genus <i>Hyperolius</i> Rapp, 1842		
<i>Hyperolius cinctiventris</i> Cope, 1862 [= <i>Hyperolius argus</i> Peters, 1854]	Bocage (1895a:168), Boulenger (1905:110), Noble (1923:252), Monard (1938:93), Inger (1959:541), Cei (1977:17).	<i>H. bocagei</i>
<i>Hyperolius granulatus</i> Boulenger, 1901	Laurent (1964a:155), Cei (1977:17).	<i>H. adspersus</i>
<i>Hyperolius graueri</i> Ahl, 1931 [= <i>Hyperolius marginatus</i> Peters, 1854]	Mertens (1937a:20).	<i>H. angolensis</i>
<i>Hyperolius marmoratus</i> Rapp, 1842	Günther (1864a:480), Bocage (1866a:55, 1879c:89, 1886b:74; 1895a:164, 1896a:113, 1897b:211), Peters (1881:150), Boulenger (1882:121, 1905:109), Ferreira (1904:112, 1906:160), Noble (1923:253), Loveridge (1936a:106, 1953a:350), Schmidt (1936:131), Monard (1937a:35, 1938:89), Mertens (1938a:427), Barbour and Loveridge (1946:127), Inger (1959:541), Laurent (1961:88), Perret (1976a:27), Cei (1977:17), Gevetti and Andreone (1993:103), Frétey et al. (2011:32), Ceriaco et al. (2014b:669).	<i>H. angolensis</i>
<i>Hyperolius microps</i> Günther, 1864	Bocage (1866a:55, 1866b:75), Frade (1963:254), Noble (1923:253).	<i>H. pusillus</i>
<i>Hyperolius parallelus</i> Günther, 1858	Peters (1877a:618), Laurent (1943a:14; 1961:89), Cei (1977:17), Frétey et al. (2011:32), Ceriaco et al. (2014b:669), Frost (2016).	<i>H. angolensis</i>
<i>Hyperolius punctulatus</i> Bocage, 1895	Bocage (1897a:204), Ferreira (1904:112), Noble (1923:253), Loveridge (1936a:107, 1936b:405), Mertens (1937:20), Monard (1938:86), Frade (1963:254), Perret (1976a:27), Frost (1985:216), Amiet (2005:275).	<i>H. nasutus</i>
Family ARTHROLEPTIDAE Mivart, 1869		
Genus <i>Leptopelis</i> Günther, 1859		
<i>Leptopelis parvobagii</i> Poynton and Broadley, 1987	Poynton and Broadley (1987:171), Schiøtz and van Daele (2003:146).	<i>L. bocagii</i>
Family PTYCHADENIDAE Dubois, 1987		
Genus <i>Ptychadena</i> Boulenger, 1917		
<i>Ptychadena ansorgei</i> (Boulenger, 1905)	Laurent (1954a:74).	<i>P. perplicata</i>
<i>Rana</i> [= <i>Ptychadena</i>] <i>bibronii</i> Hallowell, 1845	Monard (1937a:51, 1938:109), Laurent (1950a:14).	<i>P. grundisonae</i> , <i>P. guibei</i>

<i>Ptychadena chrysogaster</i> Laurent, 1954	Frétey et al. (2011:41).	<i>P. guibei</i>
<i>Rana</i> [= <i>Ptychadena</i>] <i>mascareniensis</i> (Duméril and Bibron, 1841)	Boulenger (1866a:53, 1882:52, 1905:107), Bocage (1895a:160), Monard (1937a:50, 1938:108), Guibé and Lammote (1957:978), Loveridge (1957:342), Ruas (1996: 25, 2002:144), Ceï (1977:16, 17), Frost (1985:473), Channing (2001:329), Pickersgill (2007a:128), Frétey et al. (2011:41), Frost (2016), Conradie et al. (2016:18).	<i>Ptychadena anchietae</i> , <i>P. cf. mascareniensis</i> , <i>P. porosissima</i>
<i>Ptychadena pumilio</i> (Boulenger, 1920)	Largen (2001:342), Frétey et al. (2011:41).	<i>P. taenioscelis</i>
Family PYXICEPHALIDAE Bonaparte, 1850		
Genus <i>Amietia</i> Dubois, 1987		
<i>Rana</i> [= <i>Amietia</i>] <i>fuscigula</i> (Duméril and Bibron, 1841)	Inger (1959:540), Schmidt and Inger (1959:48).	<i>Amietia angolensis</i>
Genus <i>Aubria</i> Boulenger, 1917		
<i>Aubria masako</i> Ohler and Kazadi, 1990	Channing (2011:284), Frétey et al. (2011:42), Channing et al. (2012:329), Frost (2016).	<i>Aubria</i> sp.
<i>Aubria subsigillata</i> (Duméril, 1856)	Monard (1937a:47, 1938:104), Ceï (1977:17), Perret (1996:96).	<i>Aubria</i> sp.
Genus <i>Pyxicephalus</i> Tschudi, 1838		
<i>Pyxicephalus adpersus</i> Tschudi, 1838	Bocage (1895a:157), Monard (1937a:46, 1938:103), Inger (1959:541), Frade (1963:254), Ceï (1977:17), Frost (1985:477), Channing (2001:346), du Preez and Caruthers (2009:414), Channing et al. (2012:123).	<i>P. edulis</i>
REPTILIA		
ORDER CHELONII Brongniart, 1800		
Family PELOMEDUSIDAE Cope, 1868		
Genus <i>Pelomedusa</i> Wagler, 1830		
<i>Pentonyx</i> [= <i>Pelomedusa</i>] <i>gehafie</i> (Rüppell, 1835)	Bocage (1870:68).	<i>P. subrufa</i>
Genus <i>Pelusios</i> Wagler, 1830		
<i>Sternothaerys</i> [= <i>Pelusios</i>] <i>sinuatus</i> (Smith, 1838)	Bocage (1895a:4), Monard (1937b:148), Schmidt (1933:3).	<i>P. rhodesianus</i>
<i>Pelusios subniger</i> (Bonnaterre, 1789)	Bocage (1895a:3), Peters (1877a:611), Monard (1931:109, 1937b:148), Schmidt (1933:3), Mertens (1938a:430), Loveridge (1941b:491, 1957:175), Frade (1963:252, 253).	<i>P. bechuanicus</i> , <i>P. castaneus</i> , <i>P. nanus</i> , <i>P. rhodesianus</i>
Order SQUAMATA Oppel, 1811		
Family GEKKONIDAE Gray, 1825		
Genus <i>Chondrodactylus</i> Peters, 1870		
<i>Homodactylus</i> [= <i>Pachydactylus</i> = <i>Chondrodactylus</i>] <i>bibronii</i> (Smith, 1846)	Bocage (1867b:220, 1867c:227, 1895a:15, 1887b:202, 1887c:209), Boulenger (1885:201), Mertens (1926:152), Monard (1937b:53).	<i>C. pulitzerae</i> , <i>C. laevigatus</i>

<i>Chondrodactylus turneri</i> (Gray, 1864)	Branch (1998:254), Heinz (2011:30), Bates et al. (2014:104), Ceriaco et al. (2014b:670).	<i>C. laevigatus</i>
Genus Hemidactylus Oken, 1817		
<i>Hemidactylus brookii</i> Gray, 1845	Spawls et al. (2004:86).	<i>H. angulatus</i> complex
<i>Hemidactylus platycephalus</i> Peters, 1854	Bocage (1866a:42, 1866b:60, 1870:68, 1873b:209).	<i>H. longicephalus</i>
Genus Pachydactylus Wiegmann, 1834		
<i>Pachydactylus ocellatus</i> (Cuvier, 1817) [= <i>P. geitje</i> (Sparrman, 1778)]	Bocage (1867b:220, 1895a:16), Boulenger (1885:205, 1905:110), Frade (1963:253).	<i>P. punctatus</i> complex
<i>Pachydactylus serval</i> Werner, 1910	Monard (1931:90, 1937b:54).	<i>P. punctatus</i> complex
Family AMPHISBAENIDAE Gray, 1825		
Genus Monopeltis Smith, 1848		
<i>Monopeltis capensis</i> Smith, 1848	Bocage (1873b:216, 1895a:28), Loveridge (1941c:425), Gans (1967:85).	<i>M. infuscata</i>
Family LACERTIDAE Bonaparte, 1831		
Genus Nucras Gray, 1838		
<i>Nucras ornata</i> (Gray, 1864)	Broadley (1965b:23).	<i>N. aff. tessellata</i>
Genus Pedioplanis Fitzinger, 1843		
<i>Pedioplanis namaquensis</i> (Duméril and Bibron, 1839)	Boulenger (1887:91), Bocage (1895a:31), Branch (1998:172), Makokha et al. (2007:623).	<i>P. benguelensis</i>
<i>Pedioplanis undata</i> (Smith, 1838)	Laurent (1964a:60).	<i>P. haackei</i> , <i>P. huntleyi</i>
Family CORDYLIDAE Mertens, 1937		
Genus Chamaesaura Schneider, 1801		
<i>Chamaesaura macrolepis</i> (Cope, 1862)	Bocage (1895a:25), Monard (1937b:61), Hellmich (1957b:52).	<i>C. miopropus</i>
Genus Cordylus Laurenti, 1768		
<i>Cordylus tropidosternum</i> (Cope, 1869)	Broadley (1971:22).	<i>C. angolensis</i>
Family SCINCIDAE Gray, 1825		
Genus Acontias Cuvier, 1816 "1817"		
<i>Acontias plumbeus</i> Bianconi, 1849	Monard (1937b:96).	<i>A. occidentalis</i>
Genus Lepidothyris Cope, 1892		
<i>Lygosoma</i> [= <i>Mochlus</i> = <i>Lepidothyris</i>] <i>fernandi</i> (Burton, 1836)	Laurent (1964a:78), Chirio and LeBreton (2007:266).	<i>Lepidothyris hinkeli joei</i>
Genus Mochlus Günther, 1864		
<i>Mochlus afer</i> (Peters, 1854)	Bocage (1867b:222, 1867c:227).	<i>M. sundevallii</i>
<i>Eumeces</i> [= <i>Mochlus</i>] <i>reticulatus</i> (Smith, 1849)	Bocage (1879c:88).	<i>Mochlus sundevallii</i>

Genus <i>Sepsina</i> Bocage, 1866		
<i>Scelotes</i> [= <i>Sepsina</i>] <i>bipes</i> (Linnaeus, 1766)	Günther (1864a:480).	<i>Sepsina bayoni</i>
Genus <i>Trachylepis</i> Fitzinger, 1843		
<i>Euprepes</i> [= <i>Trachylepis</i>] <i>gravenhorstii</i> (Duméril and Bibron, 1839)	Bocage (1866a:44).	<i>T. bayonii</i>
<i>Mabuia</i> [= <i>Euprepis</i> = <i>Trachylepis</i>] <i>quinquataeniata</i> (Lichtenstein, 1823)	Boulenger (1887:198, 1905:111), Bocage (1866a:44), Hellmich (1957b:54), Brygoo (1985a:90).	<i>T. binotata</i> , <i>T. bocagii</i>
<i>Euprepes</i> [= <i>Trachylepis</i>] <i>perrotetii</i> (Duméril and Bibron, 1839)	Peters (1877a:614), Bocage (1895a:39).	<i>Trachylepis maculilabris</i>
Family CHAMAELEONIDAE Gray, 1825		
Genus <i>Chamaeleo</i> Laurenti, 1768		
<i>Chamaeleo senegalensis</i> Daudin, 1802	Günther (1864a:480), Bocage (1870:68), Peters (1881:47), Loveridge (1957:97).	<i>C. gracilis etiennei</i>
Family AGAMIDAE Gray, 1827		
Genus <i>Agama</i> Daudin, 1802		
<i>Agama agama</i> (Linnaeus, 1758). <i>Agama colonorum</i> Daudin, 1802. <i>Agama occipitalis</i> Gray, 1827. <i>Agama picticauda</i> Peters, 1877	Günther (1864a:480), Bocage (1866a:42, 1895a:17), Boulenger (1885:357), Ferreira (1900a:50, 1904:117, 1905:117, 1906:170), Angel (1923:159), Hellmich (1957a:41, 1957b:50), Loveridge (1957:191).	<i>A. congica</i> , <i>A. shacki</i> , <i>A. sp.</i> , <i>Acanthocercus cyanocephalus</i>
Genus <i>Acanthocercus</i> Fitzinger, 1843		
<i>Stellio</i> [= <i>Agama</i> = <i>Acanthocercus</i>] <i>atricollis</i> (Smith, 1849)	Bocage (1866a:43, 1879b:95, 1895a:22), Peters (1881:147), Boulenger (1885:356, 358, 1905:110), Ferreira (1900a:49, 1903:15), Angel (1923:158), Schmidt (1933:9), Parker (1936:132), Monard (1937b:58, 60), Themido (1941:7), Laurent (1950a:12, 1964a:38), Klausewitz (1957:161), Frade (1963:253), Manaças (1963:228), Branch (1998:218), Spawls (2010).	<i>Acanthocercus cyanocephalus</i>
<i>Agama</i> [= <i>Acanthocercus</i>] <i>cyanogaster</i> (Rüppel, 1835)	Loveridge (1957:195), Branch and Conradie (2015:200).	<i>Acanthocercus cyanocephalus</i>
Family TYPHLOPIDAE Merrem, 1820		
Genus <i>Afrotyphlops</i> Broadley and Wallach, 2009		
<i>Typhlops</i> [= <i>Afrotyphlops</i>] <i>punctatus</i> (Leach, 1819)	Bocage (1866a:46, 1873a:252, 1895a:66), Günther (1876b:678), Boulenger (1900a:50, 1905:112), Parker (1936:120), Mertens (1937a:11, 1938a:438), Monard (1937b:103, 104), Themido (1941:9), Laurent (1950a:7), Hellmich (1957a:70), Loveridge (1957:242).	<i>A. angolensis</i> , <i>A. lineolatus</i>
Family LEPTOTYPHLOPIDAE Stejneger, 1892		
Genus <i>Leptotyphlops</i> Fitzinger, 1843/ <i>Namibiana</i> Hedges, Adalsteinsson, and Branch, 2009		
<i>Leptotyphlops conjuncta distantii</i> (Boulenger, 1892)	Bogert (1940:13).	<i>L. scutifrons</i>

<i>Leptotyphlops emini</i> (Boulenger, 1890)	Laurent (1964a:91).	<i>L. kafubi</i>
<i>Leptotyphlops nigricans</i> (Schlegel, 1839)	Bocage (1866a:46, 1867b:224), Broadley and Watson (1976:490), McDiarmid et al. (1999:39).	<i>L. kafubi</i> , <i>L. scutifrons</i> , <i>Namibiana latifrons</i>
Family VIPERIDAE Oppel, 1811		
Genus <i>Bitis</i> Gray, 1842		
<i>Echidna</i> [= <i>Vipera</i> = <i>Bitis</i>] <i>rhinoceros</i> (Schlegel, 1855)	Bocage (1866a:53, 1887a:191, 1895a:149, 1896a:113, 1897b:211), Peters (1877a:618).	<i>B. gabonica</i>
Family LAMPROPHIIDAE Fitzinger, 1843		
Genus <i>Amblyodipsas</i> Peters, 1857		
<i>Calamelaps</i> [= <i>Amblyodipsas</i>] <i>unicolor</i> (Reinhardt, 1843)	Loveridge (1933:260).	<i>A. polylepis</i>
Genus <i>Aparallactus</i> Smith, 1849		
<i>Aparallactus lineatus</i> (Peters, 1870)	Boulenger (1895d:173, 1896:259, 1915:217), Bocage (1897a:201), de Witte and Laurent (1947:128), Laurent (1954a:45).	<i>A. capensis</i>
Genus <i>Atractaspis</i> Smith, 1849		
<i>Atractaspis aterrima</i> Günther, 1863	Bocage (1873a:223), Boulenger (1915:223), Chirio and LeBreton (2007:624).	<i>A. congica</i>
<i>Atractaspis corpulenta</i> Peters, 1877	Bocage (1866a:49).	<i>A. irregularis</i>
Genus <i>Boaedon</i> Duméril, Bibron and Duméril, 1854		
<i>Boaedon</i> [= <i>Lamprophis</i> = <i>Boodon</i>] <i>lineatus</i> Duméril, Bibron and Duméril, 1854	Günther (1864a:480), Bocage (1895a:78, 80), Boulenger (1893:332, 1896:616, 1905:112), Ferreira (1897b:244, 1900a:51, 1903:10, 1904:114, 1906:167), Monard (1937b:113, 117), Schmidt (1933:13), Loveridge (1936a:22), Mertens (1937a:12, 1938a:439), Bogert (1940:21), Themido (1941:9), Laurent (1950a:7, 1954a:43, 1964a:93), Hellmich (1957a:71, 1957b:60), Thys van den Audenaerde (1966:32), Wallach et al. (2014:96).	<i>Boaedon angolensis</i> , <i>B. variegatus</i> , <i>B. fuliginosus</i>
Genus <i>Lycophidion</i> Fitzinger, 1843		
<i>Lycophidion capense</i> (Smith, 1831)	Hellmich (1957a:71), Peters (1877a:615, 1881:149), Bocage (1895a:81, 1896a:112), Ferreira (1904:115, 1906:167), Boulenger (1893:616, 1905:112), Monard (1937b:117), Schmidt (1933:13), Bogert (1940:30), Hellmich (1957a:61, 1957b:71).	<i>L. hellmichi</i> , <i>L. multimaculatum</i>
<i>Lycophidion semiannule</i> Peters, 1854	Ferreira (1897b:243), Monard (1937b:113).	<i>L. multimaculatum</i>
Genus <i>Polemon</i> Jan, 1858		
<i>Miodon</i> [= <i>Polemon</i>] <i>gabonensis</i> Duméril, 1856	Hellmich (1957a:72, 1957b:63).	<i>P. collaris</i>
Genus <i>Prosymna</i> Gray, 1849		
<i>Prosymna meleagris</i> (Reinhardt, 1843)	Bocage (1866a:47).	<i>P. ambigua</i>

Genus <i>Psammophis</i> Boie, 1825		
<i>Psammophis brevirostris</i> Peters, 1881	Boulenger (1915:213), Monard (1937b:133), Themido (1941:10), Brandstätter (1996:45).	<i>P. leopardinus</i>
<i>Psammophis elegans</i> (Shaw, 1802)	Bocage (1867b:226).	<i>P. mossambicus</i>
<i>Psammophis phillipsii</i> (Hallowell, 1844)	Broadely (1977a:24), Branch and McCartney (1992:2), Brandstätter (1996:55), Hughes (1999:64), Kelly et al. (2008).	<i>P. mossambicus</i>
<i>Psammophis sibilans</i> (Linnaeus, 1758)	Bocage (1866a:48, 1895a:114, 1896a:113), Peters (1877a:615), Ferreira (1904:116), Boulenger (1905:113, 1915:213), Schmidt (1933:14), Monard (1937b:131), Loveridge (1936a:38, 1957:279), Mertens (1938a:441), Bogert (1940:70), Loveridge (1940:30), Laurent (1950a:9, 1954a:59, 1964a:113), Hellmich (1957b:70), Thys van den Audenaerde (1966:34), Manaças (1973:196).	<i>P. leopardinus</i> , <i>P. zambiensis</i> , <i>P. mossambicus</i>
Genus <i>Psammophylax</i> Fitzinger, 1843		
<i>Rhamphiophis oxyrhynchus</i> (Reinhardt, 1843)	Günther (1864a:480, 1895:89).	<i>Psammophylax acutus</i>
Family ELAPIDAE Boie, 1827		
Genus <i>Dendroaspis</i> Schlegel, 1848		
<i>Dendroaspis</i> [= <i>Dendroaspis</i>] <i>angusticeps</i> (Smith, 1849)	Bocage (1866a:52, 1888:143, 1895a:140), Peters (1877a:617, 1888:149), Boulenger (1915:220), Schmidt (1933:15), Monard (1937b:137), Bogert (1940:92), Frade (1963:253).	<i>Dendroaspis polytepis</i>
Genus <i>Naja</i> Laurenti, 1768		
<i>Naja haje</i> (Linnaeus, 1758)	Bocage (1866a:51, 1895a:132), Peters (1877a:618), Loveridge (1957:291).	<i>N. melanoleuca</i>
Family COLUBRIDAE Oppel, 1811		
Genus <i>Dasypeltis</i> Wagler, 1830		
<i>Dasypeltis fusciolata</i> Peters, 1868 [= <i>Dasypeltis medici</i> Bianconi, 1859]	Peters (1877a:615), Bocage (1895a:106).	<i>D. scabra</i>
Genus <i>Philothamnus</i> Smith, 1840		
<i>Ahoetulla</i> [= <i>Philothamnus</i>] <i>irregularis</i> (Leach, 1819)	Günther (1864a:480), Peters (1877a:615, 1881:149), Bocage (1882b:6, 1887b:205, 1895a:85, 1896a:112), Ferreira (1903:10, 1906:167), Boulenger (1893:96), Parker (1936:125), Monard (1937b:114, 121), Mertens (1938a:439), Bogert (1940:53), Themido (1941:10), Laurent (1950a:8, 1954a:47), Loveridge (1951:9, 1957:261), Hellmich (1957b:64), FitzSimons (1962:144), Manaças (1973:191).	<i>P. irregularis</i> , <i>P. heterolepidotus</i> , <i>P. hoplogaster</i>

Taxonomic Index

A

- A[lgira] capensis* 216
Ablabes Homeyeri 345
 angolensis 345
Ablepharus 26, 247, 248, 249
 aeneus 247
 cabindae 26, 247, 248
 Cabindae 247
 wahlbergii 249
 Wahlbergii 249
Acanthocercus 7, 284, 285, 286
 atricollis 284, 285, 286
 cyancephalus 284, 285, 286
 cyanogaster 284, 286
 sp 286
Acontias 7, 35, 46, 237, 238, 239, 241
 elegans 241
 jappi 237
 kgalagadi 35, 46, 237, 238
 kgalagadi 35
 lineatus 238
 occidentalis 238, 239
 percivali 238, 239
 occidentalis 238
 plumbeus 238
 occidentalis 238
Afrana angolensis 149
Afrixalus 5, 85, 86, 87, 88
 dorsalis 85
 leptosomus 85, 87
 regularis 85
 equatorialis 87
 fluvovittatus 87
 leptosomus 87
 fulvovittatus 85, 86, 87
 leptosomus 86
 leucostictus 87
 osorioi 86, 87, 88
 quadrivittatus 85, 86, 87
 wittei 88
Afroablepharus 247, 248, 249
Afroedura 6, 30, 177, 178
 bogerti 30, 177, 178
 cf. bogerti 177
 karroica 30, 177
 bogerti 30, 177
Afrogecko 6, 29, 41, 178, 179, 188
 ansorgii 41, 178, 179
 plumicaudus 188
Afronaja 371, 372, 373, 374, 375
 mossambica 371
 nigricincta 373
 nigricollis 374
Afrotyphlops 7, 41, 45, 292, 293, 294, 295, 296, 297, 298
 angolensis 292
 angolensis 292, 293
 anomalus 41, 293, 294
 lineolatus 294, 295
 mucruso 296
 punctatus 296
 schlegelii 297, 298
 schmidti 45, 298
Agama 7, 28, 31, 32, 41, 284, 286, 287, 288, 289, 290, 291, 292
 aculeata 287, 288, 289
 aculeata 287
 agama 32, 290
 mucosoensis 32
 mucosoënsis 290
 anchietae 288, 289
 anchietae 288
 Anchietae 288
 armata 287, 288
 atricollis 284, 286
 atricollis 284
 colonorum 28, 286, 289, 290, 291, 292
 congica 289
 congica 28, 289, 290
 cyancephala 284
 cyanogaster 284, 286
 hispidata 287, 288
 aculeata 287
 mucosoensis 41, 290
 planiceps 31, 289, 290, 291, 292
 planiceps 289
 schacki 31, 291, 292
 schacki 291, 292
 sp 290
Agamidae 7, 37, 38, 41, 284
Ahaetulla 28, 389, 391, 393, 394, 396, 397
 bocagii 28
 Bocagii 397
 dorsalis 391
 gracillima 394
 heterolepidota 393
 hoplogaster 394
 irregularis 389, 394

- nitida 395
Alopecion variegatum 328
Amblyodipsas 7, 320, 321, 359, 360
 polylepis 320, 321
 hildebrandtii 321
 polylepis 320, 321
Amietia 5, 138, 149, 150, 151
 angolensis 138, 149, 151
 cf. *angolensis* 149
Amietophrynus 69, 70, 71, 72, 74, 75, 77
 buchneri 69
 funereus 70
 garmani 71
 gutturalis 72
 lemairii 74
 maculatus 75
 poweri 74
 regularis 77
Amnirana 6, 41, 45, 158, 159, 160, 161, 162
 albolabris 158
 darlingi 158, 159
 lemairei 158, 160
 lepus 160, 161, 162
 parkeriana 41, 45, 161
Amphiophis 345, 346
Amphisbaena 31, 212, 213
 ambuellensis 31, 212, 213
 quadrifrons 212
Amphisbaenidae 6, 37, 38, 41, 205
Amplorhinus 333
 nototaenia 333
Amyda 174
 triunguis 174
 triunguis 174
Anelytrops elegans 241
Angolosaurus 33, 234, 235
 skoogi 234, 235
Aparallactus 7, 321, 322
 bocagii 321, 322, 323
 Bocagii 321, 322
 capensis 321, 322, 323
 bocagii 322, 323
 capensis 322
 punctatolineatus 322
 guentheri 321, 322, 323
 Guentheri 321
 punctatolineatus 322, 323
 punctolineatus 321
 punctulolineatus 321
Aporosaura 218, 219
 anchietae 218
Arthroleptidae 5, 37, 38, 41, 117
Arthroleptis 5, 29, 41, 45, 117, 118, 119, 120, 121, 146, 148
 boulengeri 119
 carquejai 41, 45, 117, 118
 lameerei 45, 118, 119
 minutus 146
 parvulus 29, 146
 plicatus 148
 spinalis 119
 stenodactylus 120
 variabilis 118
 xenochirus 29, 120, 121
Aspidelaps 8, 30, 316, 361, 362
 (*Sepedon*) *Lichtensteinii* 316
 lubricus 30, 361, 362
 cowlesi 30, 361, 362
 infuscatus 362
Atheris 7, 308
 Lucani 308
 squamiger 308
 squamigera 308
 squamigera 308
Atractaspis 7, 28, 45, 48, 320, 323, 324, 325, 326, 327
 angolensis 327
 aterrima 324
 bibroni 323
 Bibroni 323
 bibronii 323, 324
 bibronii 323, 324
 rostrata 323, 324
 boulengeri 324
 mixta 324
 Boulengeri 324
 congica 28, 324, 325
 congica 325
 orientalis 325
 corpulentus 326
 heterochilus 326, 327
 Hildebrandtii 320
 irregularis 45, 326
 irregularis 326
 parkeri 326
 reticulata 48, 325, 326, 327
 heterochilus 48, 326, 327
 rostrata 324
Aubria 6, 46, 151, 152
 masako 151
 sp 46, 151, 152
 subsagillata 151

B

Bitis 7, 26, 41, 46, 47, 53, 309, 310, 311, 312, 313,

- 314
 arietans 47, 53, 309, 310
 arietans 309, 310
 somalica 310
 caudalis 310, 311
 caudalis 311
 gabonica 311, 312
 gabonica 312
 Gabonica 311
 heraldica 41, 46, 312, 313, 314
 hoserae 314
 lachesis 309
 nasicornis 313, 314
 peringueyi 46, 312, 313, 314, 315
 rhinoceros 311, 312
 Boaedon 7, 41, 327, 328, 329, 330, 331, 388
 angolensis 41, 327, 328, 330
 capensis 330
 cf. angolensis 327
 fuliginosus 328, 329, 330, 331
 fuliginosus 328
 lineatum 329
 lineatus 327, 328, 329, 330
 olivaceus 330, 331
 quadrilinaetus 329
 quadrilineatum 329
 variegatum 41
 variegatus 328, 329, 330
 Boidae 7, 37, 38, 307
 Boiga 405
 blandingi 405
 blandingii 405
 pulverulenta 405
 Boodon 327, 328, 329, 330
 lineatus 327
 angolensis 327
 olivaceus 330
 Bothrophthalmus 7, 331
 lineatus 331
 lineatus 331
 Boulengerina 35, 369, 370, 371, 372
 annulata 369
 annulata 369
 melanoleuca 370
 multifasciata 372
 Brachymerus bifasciatus 80
 Breviceps 5, 46, 81, 82
 adpersus 81, 82
 gibbosus 81
 gibbosus 81
 mossambicus 81, 82
 mossambicus-adpersus 81
 mossambicus/adpersus 81
 poweri 82
 sp 46, 81
 Brevicipitidae 5, 37, 38, 81
 Bucephalus 381, 383
 capensis 381
 typus 381, 383
 viridis 383
 Bufo 28, 31, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78
 benguensis 70
 benguellensis 71
 buchneri 69
 Buchneri 69
 carens 69
 cinereus 75
 decorsei 70
 dombensis 67
 funereus 69, 70, 71, 75, 76
 funereus 70
 garmani 71, 74
 grandisonae 67
 guineensis 77
 gutturalis 71, 72
 guturalis 78
 kavangensis 68
 lemairei 74
 lemairii 73, 74
 maculatus 75, 78
 melanopleura 66
 mocquardi 67
 Mocquardi 66
 pantherinus 77
 poweri 74
 pseudogarmani 75
 pusillus 76
 pusilus 75
 regularis 31, 71, 72, 73, 74, 75, 77, 78
 gutturalis 72, 73
 humbensis 31, 71, 72
 poweri 74
 pusillus 75
 regularis 72, 77
 spinosus 72, 73
 taitanus 67
 Bufonidae 5, 37, 38, 41, 66
- C**
- Calabaria 7, 45, 307
 reinhardtii 45, 307
 Reinhardtii 307
 Calamelaps 320

- polylepis 320
- unicolor 320
 - polylepis 320
- Cassiniopsis 115
 - kuvangensi 115
 - kuvangensis 115
- Cassionopsis (see as Kassina) 31
 - kuvangensis 31
- Catia africana 237
- Causus 7, 29, 35, 315, 316, 317, 318, 319, 320
 - bilineatus 29, 315, 316
 - bilineatus 315
 - lineatus 316
 - cf. rasmusseni 319, 320
 - lichtensteinii 316
 - lineatus 316
 - maculatus 316, 317, 320
 - rasmusseni 35, 320
 - resimus 317, 318
 - angolensis 317
 - rhombeatus 315, 316, 317, 318, 319, 320
 - bilineatus 315
 - rostratus 317
- Cerastes 310, 356
 - caudalis 310
 - tritaeniatus 356
 - tritaeniatus 356
- Chamaeleo 7, 279, 280, 281, 282, 283, 284
 - anchietae 279
 - Capellii 279
 - dilepis 279, 280, 281, 283
 - dilepis 280
 - quilensis 279, 280, 281
 - roperi 281
 - gracilis 280, 282, 283
 - etiennei 282, 283
 - gracilis 282
 - namaquensis 283
 - oweni 284
 - Oweni 284
 - quilensis 280
 - senegalensis 279, 282, 283
 - senegalensis 282
 - tuberculiferus 283
- Chamaeleon 279, 282, 283
 - anchietae 279
 - Anchietae 279
 - dilepis 279
 - Dilepis 279
 - etiennei 282
 - gracilis 282
 - namaquensis 283
 - parvilobus 279
 - quilensis 279
 - senegalensis 282
- Chamaeleonidae 7, 38, 279
- Chamaelycus 8, 376, 377
 - parkeri 376, 377
- Chamaesaura 6, 225, 226, 227
 - anguina 225, 226
 - anguina 226
 - oligopholis 225, 226
- macrolepis 226, 227
 - miopropus 226
- miopropis 227
 - miopropus 226, 227
- Charina reinhardtii 307
- Chelonil 6, 162
- Chiromantis 6, 160, 162
 - lepus 160
 - xerampelina 162
- Chlorophis 389, 391, 393, 394, 395, 396, 397
 - (Philothamnus) irregularis 389
 - angolensis 389
 - carinatus 391
 - heterodermus 391, 393
 - carinatus 391
 - heterolepidotus 393, 397
 - hoplogaster 394
 - irregularis 389, 394
 - shiranus 394
 - nitidus 395
 - loveridgei 395
 - ornatus 396
- Chondrodactylus 6, 46, 179, 180, 181, 182
 - angulifer 180, 181, 182
 - bibronii 181, 182
 - cf. pulitzeriae 180, 181
 - fitzsimonsi 179, 180, 182
 - laevigatus 181, 182
 - laevigatus 182
 - turneri 182
 - pulitzeriae 46, 180, 181
 - turneri 181, 182
- Cinixys 170, 171
 - belliana 170
 - erosa 171
- Clotho arietans 309
- Cobra 309
 - lachesis 309
- Colopus 198, 199
 - wahlbergii 198, 199
 - wahlbergii 198
 - Wahlbergii 198

Coluber 24, 306, 313, 357, 379, 385, 389
 canus 357
 Nasicornis 313
 palmarum 379
 scaber 379
 Sebae 306
 zebrinus 389
Colubridae 8, 37, 38, 376
Corachodichus 120
 stenodactylus 120
 stenodactylus 120
Cordylidae 6, 37, 38, 41, 225
Cordylosaurus 6, 214, 229, 230
 subtessellatus 214, 229, 230
 trivittatus 229
Cordylus 6, 30, 36, 41, 46, 47, 227, 228, 229
 angolensis 41, 46, 227, 228
 cordylus 227, 229
 angolensis 227
 machadoi 47, 228
 namakuiyus 30, 36, 41, 47, 229
 tropidosternum 227
 tropidosternum 227
 vittifer 228
 machadoi 228
Coronella 377, 378, 408, 409
 (*Mizodon*) *olivacea* 409
 hotamboeia 377, 378
 olivacea 408, 409
Crocodylus 174, 176
 cataphractus 176
 cataphractus 176
 niloticus 174
 vulgaris 174
Crocodylidae 6, 37, 38, 174
Crocodylus 6, 47, 48, 53, 174, 175, 176, 177
 cataphractus 176
 frontatus 177
 niloticus 47, 48, 174, 175
 chamses 174, 175
 suchus 48, 175
 tetraspis 177
Crotaphopeltis 8, 377, 378, 381
 hotamboeia 377, 378
 hotamboeia 377
 rufescens 377
 semiannulatus 377
 shrevei 381
Crumenifera pusilla 111
Cryptoblepharus walbergii [sic] 249
Cryptopodus Aubryi 173
Cryptothylax 5, 45, 88

greshoffii 45, 88
Ctenotus australis 266
Cyclo-derma aubryi 45
Cycloderma 6, 173
 aubryi 173
 Aubryi 173
Cystignathus 26, 117, 122, 123
 Bocagii 26, 122, 123
 Senegalensis 117

D

Dactylethra 61, 62
 laevis 62
 Muelleri 61
 mülleri 62
 Multeri 62
Dalophia 6, 25, 31, 34, 46, 205, 206, 207, 211
 angolensis 34, 205, 206, 207
 colobura 207
 ellenbergeri 205, 206, 207
 granti 207
 kaynuamarum 207
 kuanyamarum 207
 mossambica 207
 mossambicus 207
 pistillum 31, 46, 205, 206, 207
 transvaalensis 207
 welwitschii 25, 211
 Welwitschii 211
Dasia olivacea 269
Dasypeltis 8, 24, 379, 380
 fasciolata 380
 inornata 380
 medici 380
 palmarum 379
 scabra 379, 380
 inornatum 379
 inornatus 379
 palmarum 379
 scabra 379
Dendraspis 25, 362, 363
 angusticeps 363
 neglectus 362
 polylepis 363
 welwitschii 25
 Welwitschii 362
Dendroaspis 8, 25, 362, 363, 364
 angusticeps 363, 364
 jamesoni 25, 362, 363
 jamesoni 362
 jamesonii 362
 jamesonii 362

neglectus 363
 polylepis 363, 364
 polylepis 364
 Dendrophis 387, 397, 403
 (Philothamnus) semivariegata 397
 flavicularis 403
 Dendrophis smaragdina 387
 Dicroglossidae 6, 37, 38, 157
 Dicroglossus occipitalis 157
 Dipsadoboa 8, 381
 shrevei 381
 Dipsas 405
 Blandingii 405
 pulverulenta 405
 Dispholidus 8, 381, 382, 383, 384
 (Bucephalus) typus 381
 punctatus 384
 typus 381, 382, 383, 384
 kivuensis 383
 occidentalis 382
 punctatus 382, 383, 384
 typus 383, 384
 viridis 383, 384
 Distichurus Maculatus 316
 Dromophis 7, 332
 lineatus 332
 Dryiophis 401, 402
 Kirtlandii 401, 402
 Oatesi 402
 oatesii 401
 Dryophylax lineatus 332
 Dumerilia Bayonii 251

E

Echidna 309, 311
 arietans 309
 rhinoceros 311
 Echis squamigera 308
 Elapechis guentheri 365, 366
 Elaphis (Bothrophthalmus) lineatus 331
 Elapidae 8, 37, 38, 361
 Elaps 326, 362
 irregularis 326
 jamesoni 362
 jamesonii 362
 Elapsoidea 8, 365, 366, 367
 decocteri 366, 367
 huilensis 367
 guentheri 365
 guentherii 365
 güntheri 365, 366
 güntheri 365

 semiannulata 366
 Güntheri 365, 366
 Güntherii 365, 366
 Güntherii 365
 semi-annulata 366, 367
 semiannulata 365, 366, 367
 moebiusi 367
 semiannulata 366, 367
 sundevalli 365
 semiannulata 365
 sundevallii 365, 366
 güntheri 365, 366
 güntherii 365
 semiannulata 366
 Empagusa 275
 Emys castanea 165
 Engystoma marmoratum 83
 Eremias 213, 222, 223, 224
 benguelensis 222, 223
 benguellensis 222, 223
 lugubris 213
 namaquensis 222, 223
 sp 222
 undata 222, 223, 224
 undata 222, 223, 224
 Eryx reinhardtii 307
 Eumeces 239, 246
 reticulatus 246
 Eumecia 7, 41, 239, 240, 245
 anchieta 239
 anchietae 41, 239, 240
 anchietae 239
 major 239, 240
 Anchietae 239
 Eumices [sic] (Riopa) sunderallii 245
 Euphlyctis occipitalis 157
 Euprepes 26, 28, 244, 245, 247, 252, 253, 254, 256,
 257, 258, 259, 260, 262, 263, 264, 265, 266, 267,
 268, 269, 270
 (Eupr.) Perrotetii 263
 (Euprepis) striatus 268
 spilogaster 268
 (Mabuia) breviceps 247
 (Mabuia) megalurus 264
 acutilabris 252
 affinis 259, 260
 anchietae 26, 264
 Anchietae 263
 angolensis 254
 australis 266
 Bayonii 256
 binotata 257

binotatus 257, 258
 Blandingii 253
 damaranus 260
 Ivensi 244
 ivensii 26
 lacertiformis 262
 maculialbris 263
 maculilabris 263
 notabilis 263, 264
 occidentalis 266
 olivaceus 269
 Oliveiri 254
 albo-punctatus 254
 olivieri 256
 albo-punctatus 256
 perottetii 264
 petersi 258, 259
 Petersi 258
 petersii 259
 punctatissimus 270
 punctulatus 267
 quinquetaeniata 259
 quinquetaeniatus 258
 sulcatus 269
 varia 265
 vittatus 266
 Wahlbergii 270
 Euprepis 254, 256, 258, 265
 affinis 254
 angolensis 256
 blandingii 254
 quinquetaeniata 258
 raddoni 254
 Eutropis dissimilis 258, 259

F

Feylinia 7, 45, 240, 241, 242
 currori 240, 241, 242
 elegans 241
 grandisquamis 242
 Currori 240, 241, 242
 elegans 241, 242
 grandisquamis 242
 grandisquamis 45, 242
 polylepis 240

G

Gastropyxis smaragdina 387
 Gecko 186
 Mabouia 186
 Gekkonidae 6, 37, 38, 41, 177

Geochelone 172, 173
 pardalis 172, 173
 babcocki 172, 173
 pardalis 173
 Gerrhosauridae 6, 37, 38, 41, 229, 235
 Gerrhosaurus 7, 29, 32, 33, 41, 46, 229, 230, 231, 232, 233, 234, 235, 236
 auritus 230, 231, 232
 bulsi 230, 231, 232
 cf. nigrolineatus 233
 flavigularis 233
 nigrolineatus 233
 intermedius 232, 234
 multilineatus 41, 230, 231, 232, 234
 nigro-lineatus 233
 nigrolineatus 32, 230, 231, 232, 233, 234
 ahlefeldti 32, 233, 234
 nigrolineatus 231, 233
 robustus 235, 236
 skoogi 29, 33, 46, 234, 235
 validus 235, 236
 maltzahni 235
 Glaniolestes ornatus 384
 Glauconia 299, 300, 301, 302, 303
 kafubi 299
 labialis 301
 latifrons 302
 rostrata 303
 scutifrons 300, 302
 Godionotus brussaui 332
 Gonionotophis 7, 332, 333, 335, 336, 340, 341
 brussaui 332, 333
 capensis 335
 poensis 340
 vernayi 336
 Grayia 8, 45, 384, 385, 386
 caesar 45, 384
 ornata 384
 silurophaga 385, 386
 smithi 385
 smithii 384, 385, 386
 Smithii 386
 smythii 385, 386
 Smythii 385, 386
 tholloni 386
 Tholloni 386
 triangularis 385
 Gymnopus aegyptiacus 173

H

Hapsidophrys 8, 387
 smaragdina 387

- smaragdinus 387
Helicops 406, 407
 bangweolicus 407
 bicolor 406
Heliobolus 6, 213
 lugubris 213, 214
Hemerophis 389
 zebrinus 389
Hemidactylus 6, 41, 47, 182, 183, 184, 185, 186, 187, 190
 angulatus 182, 183, 187
 ansorgii 187, 188
 bayonii 41, 183, 184
 Bayonii 183
 benguellensis 41, 184
 bocagei 185
 bocagii 185
 brookii 182
 brookii 182, 183, 184
 angulatus 182, 183, 184
 capensis 190
 cf. *muriceus* 187
 intestinalis 187, 188
 longicephalus 185, 186, 187, 188
 mabouia 47, 184, 185, 186, 187
 mabouia 186
 muriceus 187, 188
 platycephalus 185, 186
Hemirhagerrhis 7, 333
 nototaenia 333, 334
 viperina 333, 334
Hemisotidae 5, 37, 38, 83
Hemismus 5, 83, 84
 guineensis 83, 84
 microps 83, 84
 guttatum 83
 marmoratum 83, 84
 marmoratus 83, 84
 (?) *angolensis* 84
 guineensis 83
 sudanense 84
Heterolepis 335, 340
 bicarinatus 340
 capensis 335
 poensis 340
Heterophis *resimus* 317
Hildebrandtia 5, 26, 41, 46, 128, 129
 angolensis 128, 129
 myotympanum 128
 ornata 46, 128, 129
 ornata 129
 ornatissima 128
 ornatissima 41, 128, 129
Holaspis 6, 214, 230
 guentheri 214, 230
 guentheri 214
Holuropholis olivaceus 330
Hoplobatrachus 6, 26, 157
 occipitalis 26, 157
Hormonotus 8, 387, 388
 modestus 387, 388
Hyla *Aubryi* 122
Hylambates 88, 121, 122, 123, 124, 125, 126
 anchietae 121
 angolensis 122, 123
 Aubryi 122
 bocagei 123
 leucopunctata 123, 124
 bocagii 123
 cynnamomeus 124
 greshoffii 88
 Greshoffii 88
 marginatus 125
 notatus 126
 viridis 126
Hylarana 158, 159, 160, 161
 albolabris 158, 160
 cf. *darlingii* 159
 darlingi 159
 lemairei 160
 parkeriana 161
Hylarthroleptis 143
 brevipalmatus 143
 graueri 143
Hyperoliidae 5, 37, 38, 41, 85
Hyperolius 5, 26, 28, 31, 35, 41, 45, 46, 55, 85, 86, 87, 88, 89, 90, 91, 92, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 148
 (*Hyperolius*) [subgenus] 92, 94, 97, 98, 100, 102, 104, 105, 106, 108, 109, 110, 111, 112, 113, 114, 115
 acuticeps 107
 adspersus 28, 89, 90, 96
 angolanus 109, 110
 angolensis 26, 28, 31, 90, 91, 92, 94, 96, 103, 111
 argus 98
 benguellensis-nasutus complex 95
 benguellensis 89, 90, 94, 95, 96, 105, 107, 108
 bicolor 41, 96
 bocagei 26, 96, 97, 98, 105
 cf. *adspersus* 89
 cf. *steindachneri* 115

- chelaensis 35, 41, 46, 98
 cinctiventris 97, 98
 cinereus 31, 41, 98, 99, 100, 113
 cinnamomeo-ventris 100, 101
 cinnamomeoventris 100
 cinnamomeoventris 100, 101, 102, 110
 citrinus 91
 concolor 101, 102
 dartevelliei 102
 decoratus 91
 dorsalis 85
 erythromelanus 31, 91, 92
 fasciatus 109
 ferreirai 109
 fulvovittata 88
 fulvovittatus 85, 88
 fuscigula 41, 102
 glandicolor 103
 granulatus 89, 90
 graueri 91
 gularis 41, 103
 huillensis 90, 91
 insignis 90, 91, 94
 kivuensis 104, 105, 112
 kivuensis 104
 multifasciatus 104
 langi 105
 leptosomus 28, 87
 quadrivittatus 87
 lucani 108, 109
 Lucani 108
 machadoi 114, 115
 maestus 41, 105, 106
 Maestus 105
 marmoratus 26, 90, 91, 94, 96, 103, 105, 106, 110, 111
 albofasciatus 91
 alborufus 91
 angolensis 26, 90, 91, 110
 huillensis 91
 insignis 91, 96
 marungaensis 91
 parallelus 91
 vermiculatus 91
 marungaensis 91
 microps 111, 112
 microstictus 91
 microtictus 91
 modestus 101
 multifasciatus 104, 113
 nasutus 26, 89, 90, 94, 95, 96, 102, 106, 107, 108
 adpersus 89, 102
 nasutus 106
 nasutus complex 95, 96, 102
 nitidulus 108
 ocellatus 45, 108, 109
 osorioi 86
 oxyrhynchus 94, 96
 parallelus 90, 91, 92, 94
 alborufus 91
 huillensis 92
 insignis 91
 pliciferus 91
 toulsoni 91
 parallelus-marginatus 92, 94
 parallelus-marginatus subgroup 92, 96
 platycephalus 105
 langi 105
 platyceps 109, 110
 angolanus 109
 angolensis 110
 plicatus 148
 polli 110
 protchei 41, 111
 punctulata 107
 punctulatus 106
 pusillus 111, 112
 quinquevittatus 104, 105, 112, 113
 quinquevittatus 112
 raymondi 35, 41, 100, 113
 rhizophilus 41, 113, 114
 Rhizophilus 113
 seabrai 97
 steindachneri 114, 115
 steindachneri 114
 Toulsonii 91
 toulsonii 26
 Toulsonii 90
 tristis 100
 vermiculatus 28, 90, 91
 vilhenai 41, 115
 viridiflavus 98, 103
 viridis 107
 Hypoptophis 7, 334, 335
 wilsoni 334
 katangae 334
 wilsonii 334, 335
- ## I
- Ichnotropis 6, 32, 41, 45, 214, 215, 216, 217, 218, 220
 bivittata 214, 215, 216, 217, 218
 bivittata 214, 215
 pallida 216
 bivittatus 215, 216

capensis 41, 215, 216, 217
 bivittata 215
 capensis 216, 217
 overlaeti 41, 217
 dumerilii 216
 Dumerilii 214
 longipes 215
 microlepidota 41, 45, 218
 overlaeti 45, 217, 218
 spp 216
 squamulosa 220
Ixalus concolor 101

K

Kaoko Gecko 198
 vanzyli 198
Kassina 5, 31, 34, 46, 115, 116, 117
 angeli 117
 cf. maculosa 116
 kuvangensis 46, 115, 116
 maculosa 34, 116
 senegalensis 117
 angeli 117
 microps 117
Kinixys 6, 51, 52, 169, 170, 171
 belliana 52, 169, 170, 171
 spekii 171
 Belliana 170
 belliana 170
 cf. belliana 170
 erosa 171
 spekii 169, 170, 171
Kolekanos 6, 41, 46, 188
 plumicaudus 41, 188

L

Lacerta 213, 277, 278
 lugubris 213
 monitor 277, 278
 nilotica 277, 278
 tessellata 221
Lacertidae 6, 37, 38, 41, 213
Lampreremias lugubris 213
Lamprophiidae 7, 37, 38, 41, 320
Lamprophis 329, 330, 331, 387
 fuliginosus 329
 modestus 387
 olivaceus 330
Lepidosternon (*Phractogonus*) *Anchietae* 207
Lepidothyris 7, 45, 242, 243
 fernandi 243

hinkeli 45, 242, 243
 joei 45, 242, 243
Leptophis heterolepidota 393
Leptodira 377
 hotamboeia 377
 rufescens 377
Leptopelis 5, 26, 41, 45, 121, 122, 123, 124, 125, 126, 127
 anchietae 45, 121, 122, 125
 angolensis 41, 123, 124
 aubryi 122, 125
 bocagei 123, 124
 bocagii 26, 122, 124, 125
 cf. anchietae 121
 cf. bocagii 123
 cinnamomeus 124
 jordani 41, 45, 125
 marginatus 41, 125
 nordequatorialis 122
 notatus 126
 oryi 122
 parbocagii 123, 124
 tessmanni 126
 viridis 124, 126, 127
 cinnamomeus 124
Leptophis 26, 391, 392, 394, 402
 Chenoni 392, 394
 dorsalis 26, 391, 392
Leptosiaphos 7, 243, 247
 (*Lacertaspis*) *breviceps* 247
 dewittei 243
Leptotyphlopidae 7, 37, 38, 41, 299
Leptotyphlops 7, 299, 300, 301, 302, 303
 conjuncta 300
 distantia 300
 emini 299, 300
 emini 299, 300
 kafubi 299, 300
 labialis 301
 latifrons 302
 nigricans 300
 nigricans 300
 occidentalis 302
 rostrata 302
 rostratus 303
 scutifrons 300, 301, 302, 303
 scutifrons 300
 scutifrons/incognitus/conjunctus complex 301
Letheobia 7, 299
 praeocularis 299
Limaformosa 7, 335, 336
 capensis 335, 336

vernayi 336
 Limnodytes albolabris 158
 Limnophis 8, 26, 406, 407, 408
 bangweolicus 407, 408
 bicolor 26, 406, 407
 bangweolicus 407
 bicolor 406
 Lubuya 7, 26, 239, 244, 245
 ivensii 244
 Lycodon 329
 fuliginosus 329
 Lycodonomorphus 8, 388
 subtaeniatus 388
 subtaeniatus 388
 upembae 388
 Lycophidion 7, 28, 48, 336, 337, 338, 339, 340
 capense 336, 338, 339, 340
 capense 336, 338
 multimaculatum 338
 ornatum 339, 340
 hellmichi 48, 336
 Horstockii 338
 laterale 337
 meleagre 28, 337, 338
 multimaculatum 338, 339
 ornatum 339, 340
 semiannulus 338
 Lycophidium 337, 338
 Capense 338
 meleagris 337
 multimaculata 338
 Lygodactylus 6, 30, 188, 189, 190, 191, 192
 angolensis 188, 189, 191
 bradfieldi 189, 190
 capensis 189, 190, 191
 capensis 190
 chobiensis 191
 grotei 191
 laurae 30, 188, 189
 lawrencei 191, 192
 picturatus 191
 chobiensis 191
 Lygosoma 239, 242, 243, 244, 245, 246, 247
 (Eumecia) Anchietae 239
 (Hinulia) compressicauda 244
 (Panaspis) breviceps 247
 (Siaphos) compressicauda 243
 anchietae 239
 dewittei 243
 fernandi 242
 Ivensii 244
 modesta 246

 modesta 246
 modestum 246
 sundevalii 246
 Lygosominae 248

M

Mabouia 28
 Mabuia 29, 244, 253, 254, 256, 258, 259, 263, 265, 266, 267, 269, 270
 ansorgii 29
 Ansorgii 269
 bayonii 256
 Bayonii 256
 bocagi 269
 ansorgei 269
 bocagii 258, 259
 chimbana 259
 ivensii 244
 laevis 29, 263
 maculilabris 263
 occidentalis 266
 Petersi 258
 punctulata 267
 quinquetaniata 258
 raddonii 253
 Raddonii 253
 striata 256, 265, 270
 angolensis 256, 265
 sulcata 269
 ansorgii 269
 varia 254
 Mabuya 31, 244, 245, 252, 253, 254, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270
 acutilabis 252
 affinis 254
 angolensis 265
 bayonii 256, 257
 bayonii 256
 huilensis 256, 257
 binotata 257
 bocagei 258
 bocagii 258
 bocagii 258
 chimbana 259, 260
 hoeschi 261
 ivensi 244, 245
 septemlineata 244, 245
 ivensii 244, 245
 lacertiformis 262
 laevis 263
 longiloba 267

- longiloba 267
- maculilabris 263
 - maculilabris 263
- megalura 264, 265
- occidentalis 266
- punctulata 267
- quiquetaeniata 257, 258
 - binotata 257
 - quiquetaeniata 258
- radoni 254
- spilogaster 268
- striata 31, 259, 260, 265, 268, 270
 - angolensis 31, 259, 265
 - chimbana 259
 - spilogaster 268
 - striata 270
 - wahlbergi 270
- sulcata 269
 - ansorgii 269
- varia 254
 - varia 254
- variegata 267
 - punctulata 267
- Macrophis ornatus 384
- Maltzahni 235
- Matobosaurus 7, 235, 236
 - maltzahni 235, 236
- Mecistops 6, 48, 176
 - cataphractus 48, 176
 - cf. cataphractus 176
- Megalixalus 87, 116
 - fornasinii 87
 - congicus 87
 - maculosus 116
- Megalixus 87, 88
 - leptosomus 87
 - quadrivittatus 87
 - wittei 88
- Megatyphlops 293, 294, 296, 297, 298
 - anomalus 293, 294
 - mucruso 296, 297
 - schlegelii 297
 - schlegelli 297
- Mehelya 7, 30, 332, 335, 336, 340, 341
 - capensis 335
 - capensis 335
 - poensis 340, 341
 - poënsis 340
 - vernayi 30, 336
- Melanoseps 7, 245
 - occidentalis 245
 - zairensis 245
- Meroles 6, 46, 218, 219, 220
 - anchietae 46, 218, 219, 220
 - reticulatus 219
 - squamulosus 220
- Mertensophryne 5, 46, 66, 67
 - aff. mocquardi 66
 - melanopleura 66
 - mocquardi 46, 66, 67
- Mesalina benguelensis 222
- Michellia katangae 335
- Microhylidae 5, 37, 38, 79
- Microsoma 28, 341
 - collare 28, 341
- Miodon 341
 - collaris 341
 - gabonensis 341
- Mizodon 408, 409
 - olivaceus 408
- Mochlus 7, 242, 243, 245, 246
 - afer 245
 - fernandi 242
 - sundevalii 246
 - sundevalii 246
 - sundevallii 245
- Monitor 277
 - niloticus 277
 - saurus 277
- Monopeltis 6, 25, 31, 34, 41, 46, 205, 206, 207, 208, 209, 210, 211
 - anchietae 31, 46, 207, 208, 209
 - Anchietae 207
 - capensis 208, 209
 - capensis 208
 - devisi 31, 207, 208
 - ellenbergeri 205
 - Ellenbergeri 206
 - giganteus 211
 - granti 31, 205, 206
 - kuanyamarum 31, 206
 - transvaalensis 206
 - trnasvaalensis 205
 - infuscata 46, 208, 209
 - luandae 34, 41, 209
 - okavangensis 31, 207, 208
 - perplexus 34, 41, 209
 - pistillum 206
 - sphenorhynchus 208
 - vanderysti 210
 - villhenai 210
 - Vanderysti 210
 - welwitschii 41, 205, 211
 - Welwitschii 211

Mopaneveldophis 8, 389
zebrinus 389

N

Naia 372, 374, 376
 goldii 376
 Goldii 376
 multifasciata 372
Naja 8, 30, 35, 53, 368, 369, 370, 371, 372, 373, 374, 375, 376
 (Afronaja) mossambica 371
 (Afronaja) nigricincta 372, 373
 (Afronaja) nigricollis 374
 (Boulengerina) annulata 369
 (Boulengerina) melanoleuca 370
 (Boulengerina) multifasciata 372
 (Uraeus) anchietae 368
 anchietae 368, 369
 Anchietae 368
 annulata 35, 369, 370
 annulifera 369
 anulifera 368
 fasciata 372
 goldii 376
 haje 368, 369, 370
 haje 370
 melanoleuca 370
 melanoleuca 369, 370, 371, 375
 melanoleuca 370
 subfulva 375
 mossambica 371, 372, 373
 mossambica 371
 nigricincta 373
 multifasciata 372
 nigricincta 372, 373
 nigricincta 373
 nigricollis 30, 372, 373, 374, 375
 fasciata 372, 373
 melanoleuca 373, 374
 nigricincta 30, 373
 nigricinctus 372, 373
 nigricollis 374
 occidentalis 373, 374
 woodi 373
 subfulva 370, 371, 375
Namibiana 7, 41, 46, 48, 301, 302, 303
 labialis 301
 latifrons 301, 302
 rostrata 41, 46, 48, 303
Natricidae 8, 37, 38, 406
Natriciteres 8, 28, 408, 409
 bipostocularis 408, 409

 olivacea 28, 408, 409
 bipostocularis 408
 ulugurensis 409
 olivaceus 408, 409
 olivacea 409
 olivaceus 409
 uluguruensis 408
 pembana 409
 sylvatica 409
 variegata 408, 409
 bipostocularis 408
Natrix 361, 362
 lubrica 361, 362
Neusterophis 28, 408, 409
 atratus 28
 olivaceus 409
 olivaceus 409
Neusterophus atratus 409
Nucras 6, 41, 48, 221, 222
 aff. tessellata 221, 222
 holubi 222
 intertexta 221
 holubi 221
 ornata 221
 scalaris 41, 48, 221
 taeniolata 222
 tessellata 221, 222
 livida 222
 taeniolata 221
 tessellata 222

O

Onychocephalus 292, 293, 294, 296, 297, 298
 angolensis 292, 293
 anomalus 293
 Kraussii 292
 liberiensis 294
 lineolatus 294
 mucruso 296
 petersii 298
 Petersii 297
 Schlegelii 297
Ophilositum parkeri 376
Ophirhina Anchietae 357
Osteoblepharon 177
Osteolaemus 6, 45, 48, 176, 177
 osborni 177
 tetraspis 45, 48, 176, 177
 osborni 177

P

- Pachydactylus* 6, 30, 41, 46, 179, 180, 181, 182, 192, 193, 194, 195, 196, 197, 198, 199
amoenoides 195, 196
angolensis 41, 192, 193, 198
bibronii 30, 180, 181, 182
pulitzerae 30, 180, 181
turneri 180, 181
capensis 180
caraculicus 193
cf. oreophilus 194
fitzsimonsi 179
geitje 195
laevigatus 179, 180, 181
fitzsimonsi 179, 180
laevigatus 180, 181
pulitzerae 180
tessellatus 180
ocellatus 194, 195
oreophilus 194
parascutatus 192
pulitzerae 182
punctatus 194, 195, 196, 197
brunnthaleri 194
punctatus 194
rangei 46, 196, 198
scherzi 196, 197
scutatus 30, 192, 193, 197, 198
angolensis 30, 192, 193, 198
scutatus 193
serval 194, 195
stellatus 181, 182
tessellatus 179, 180
vanzyl 196, 198
wahlbergii 198
Pachyrhynchus Anchietae 218
Palmatogeocko 196, 198
rangei 196
vanzyl 198
Panaspis 7, 26, 35, 48, 247, 248, 249, 250
aff. wahlbergii 249
anaeus 248
breviceps 247
cabindae 48, 247, 248
maculicollis 35, 248, 249, 250
wahlbergii 249, 250
Paranaja 369, 372
multifasciata 369, 372
Paratetradactylus Ellenbergeri 236
Pedioplanis 6, 35, 41, 46, 222, 223, 224, 225
benguellensis 222, 223
haackei 35, 41, 223, 224, 225
huntleyi 224, 225
huntleyi 35, 41, 224, 225
namaquensis 222, 223
undata 222, 224, 225
Pelomedusa 6, 51, 162, 163, 164
galeata 162
subrufa 162, 163, 164
subrufa 162
Pelomedusidae 6, 37, 38, 162
Pelusios 6, 45, 51, 52, 164, 165, 166, 167, 168
adansoni 167
bechuanicus 164
bechuanicus 164
castaneus 52, 165, 166, 168
castaneus 165
chapini 165
rhodesianus 168
seychellensis 165
chapini 165, 166
derbianus 165, 166, 167
gabonensis 45, 166, 167
nanus 166, 167
nigricans 167, 168
rhodesianus 167
rhodesianus 165, 166, 167, 168
sinuatus 167
sinuatus 167
subniger 164, 165, 167, 168
Pentonyx 162, 166
gabonensis 166
Gehafie 162
Philothamnus 8, 26, 28, 353, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398
angolensis 389, 390, 391, 393, 395
carinatus 391
dorsalis 391, 392
Guntheri 389
heterodermus 393
heterodermus 393
heterolepidotus 393, 394
hoplogaster 390, 391, 394, 395
irregularis 389, 390, 391, 392, 393, 394, 395, 396, 397
angolensis 389
irregularis 389, 393, 394
ornatus 396
natalensis 394
nitidus 395, 396
loveridgei 395, 396
ornatus 393, 394, 395, 396, 397
semivariegatus 391, 392, 393, 395, 397, 398
dorsalis 391

- semivariegatus 398
 Smithii 397
 sp 398
 thomensis 396
 variegatus 28
 Phrynobatrachidae 5, 37, 38, 41, 143
 Phrynobatrachus 5, 29, 41, 143, 144, 145, 146, 147, 148, 149
 auritus 149
 brevipalmatus 41, 143
 cf. natalensis 147
 cf. parvulus 146
 cryptotis 144, 146
 mababiensis 144, 145, 146
 minutus 144, 145, 146
 natalensis 147, 148
 parvulus 144, 145, 146
 plicatus 148, 149
 Phrynomantis 5, 46, 79, 80, 81
 affinis 46, 79
 annectens 79
 bifasciata 80
 bifasciatus 79, 80, 81
 bifasciatus 80
 microps 81
 Phrynomeris 79, 80
 affinis 79
 annectens 79
 Phyllodactylus (see also Afrogecko) 29, 178
 ansorgii 29
 Ansorgii 178
 Pipidae 5, 37, 38, 59
 Polemon 8, 341
 collaris 341
 collaris 341
 Polydaedalus 277
 Poyntonophrynus 5, 41, 46, 67, 68
 dombensis 67, 68
 grandisonae 41, 46, 67, 68
 kavangensis 46, 68
 vertebralis 68
 Prosymna 8, 29, 342, 343, 344
 ambigua 342, 343
 ambigua 342
 brevis 342
 ambiguus 342
 angolensis 29, 342, 343, 344
 bocagii 342
 frontalis 342, 343, 344
 meleagris 342
 visseri 344
 Psammobates 173
 Psammophis 8, 25, 26, 29, 41, 46, 332, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355
 acutus 25, 354
 angolensis 345, 346
 ansorgii 29, 41, 346
 Ansorgii 346
 bocagii 352, 353
 Bocagii 352
 brevirostris 347
 brevirostris 347
 leopardinus 347
 cf. mossambicus 348
 elegans 348
 irregularis 353
 irregularis 353
 jallae 46, 346, 347
 leightoni 350, 351
 namibensis 350
 leopardinus 347, 348
 moniliger 351
 notostictus 351
 mossambicus 348, 349, 350
 namibensis 350, 351
 notostictus 351
 oxyrhynchus 354
 phillipsii 348, 350
 rhombeatus 355
 rohani 346, 347
 Rohani 346
 sibilans 26, 332, 347, 348, 350, 351, 352, 353, 354
 brevirostris 347
 leopardina 347
 leopardinus 26, 347
 mossambica 348
 notostictus 351
 sibilans 347, 348, 353
 stenocephala 351
 stenocephalus 351
 subtaeniata 351, 352
 stenocephalus 26
 subtaeniatus 46, 351, 352, 353
 subtaeniatus 352
 trigrammus 353
 zambiensis 350, 353, 354
 Psammophylax 8, 25, 41, 333, 334, 354, 355, 356, 357
 acutus 354, 355, 357
 acutus 354, 357
 jappi 354
 nototaenia 333, 334
 ocellatus 355, 356

- rhombeatus 41, 355, 356
 ocellatus 41, 355, 356
 rhombeatus 356
 tritaeniatus 354, 355, 356, 357
 tritaeniatus 354, 355, 356, 357
 viperinus 333, 334
 Pseudaspidinae 358, 359
 Pseudaspis 8, 357, 358, 359
 cana 357, 358
 anchietae 357, 358
 Pseudohaje 8, 376
 goldii 376
 Ptychadena 5, 29, 31, 47, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143
 (Ptychadena) anchietae 130
 (Ptychadena) ansorgii 130
 (Ptychadena) bunoderma 131
 (Ptychadena) chrysogaster 133, 134
 (Ptychadena) guibei 133
 (Ptychadena) keilingi 134
 (Ptychadena) mascareniensis 135
 (Ptychadena) oxyrhynchus 137
 (Ptychadena) perplicata 138
 (Ptychadena) porosissima 139
 (Ptychadena) pumilio 141
 (Ptychadena) subpunctata 140
 (Ptychadena) upembae 142
 (Ptychadena) uzungwensis 142
 anchietae 129
 ansorgei 130, 138
 ansorgi 130
 ansorgii 130, 131
 bibroni 133, 136
 bibronii 132
 bunoderma 29, 31, 131, 132
 cf. grandisonae 132
 cf. mascareniensis 134
 cf. mossambica 136
 chrysogaster 133
 guibei 133
 grandisonae 132, 133
 guibei 133, 134
 hylaee 135, 136
 keilingi 134
 loveridgei 138, 139
 mascareniensis 136
 mascareniensis 47, 134, 135, 139
 bibroni 135
 hylaee 134, 135
 mossambica 136
 nilotica 135
 oxyrhynchus 136, 137
 perplicata 138
 porosissima 138, 139
 pumilio 141
 smithi 141
 subpunctata 139, 140, 142
 taenioscelis 141
 upembae 142
 machadoi 142
 uzungwensis 142, 143
 Ptychadenidae 5, 37, 38, 41, 128
 Python 7, 51, 52, 53, 304, 305, 306, 307
 anchietae 304
 Anchietae 304
 natalensis 51, 304, 305, 307
 Natalensis 305
 sebae 53, 304, 305, 306, 307
 natalensis 304
 sebae 306
 Sebae 306
 sp 52
 Pythonidae 7, 37, 38, 304
 Pythonodipsas 8, 358, 359
 carinata 358
 Pyxicephalidae 5, 37, 38, 149
 Pyxicephalus 6, 46, 129, 152, 153, 155, 156
 adpersus 152, 153
 edulis 152
 edulis 46, 152, 153
 rugosus 155, 156
 tuberculosis 155
- R**
- Rana 26, 29, 31, 81, 91, 128, 129, 130, 131, 132, 133, 134, 135, 136, 138, 139, 140, 142, 143, 149, 151, 152, 153, 155, 156, 157, 158, 159, 160, 161, 162
 (Amnirana) albolabris 158
 (Amnirana) darlingi 159
 (Amnirana) lemairei 160
 (Amnirana) parkeriana 161
 (Aubria) subsigillata 151
 (Ptychadena) bibroni 132
 (Ptychadena) buneli 131
 (Ptychadena) keilingi 134
 (Ptychadena) mascareniensis 135, 139
 (Ptychadena) oxyrhynchus 136
 oxyrhynchus 136
 (Pyxicephalus) adpersus 152, 153
 (Rana) angolensis 149
 (Rana) darlingi 159
 (Tomopterna) cacondana 155
 (Tomopterna) signata 155
 (Tomopterna) tuberculosa 155

- adpersa 152
- albolabris 158, 159, 160, 161, 162
 - acutirostris 161, 162
- adiscifera 159, 160
 - lemairei 160
 - parkeriana 161, 162
- anchietae 129
- angolensis 129, 149
- ansorgei 130
- ansorgii 130
- Ansorgii 130
- bragantina 26, 157
- buneli 31, 132
- bunoderma 131
- chapini 149
- chrysogaster 133
 - guibei 133
- cryptotis 29, 153
- darlingi 158, 159, 160
- Delalandi 149
- fusca 161
 - acutirostris 161
- fuscigula 149
 - angolensis 149
- grandisonae 132
- keilingi 31
- Lemairei 160
- loveridgei 139
- marmorata 91
 - huillensis 91
- mascareniensis 129, 132, 134, 135, 139, 142, 143
 - mascareniensis 135
 - porosissima 139
 - subpunctata 139, 142
 - uzungwensis 142, 143
- miotympanum 129
- mossambica 136
- mossambicus 81
- occipitalis 157
- ornata 128, 129
 - ornatissima 128, 129
- ornatissima 26, 128, 129
- oxyrhyncha 136
- oxyrhynchus 129, 136
 - oxyrhynchus 129
 - oxyrhynchus 136
- parkeriana 161
- porosissima 138, 139
- Rana (Hildebrandtia) 128
 - myotympanum 128
 - ornatissima 128
- rugosa 155
 - subpunctata 139, 140, 143
 - subsigillata 151
 - tuberculosa 155, 156
 - upembae 142
- Ranidae 6, 37, 38, 41, 158
- Rappia 85, 86, 87, 88, 89, 90, 91, 94, 95, 96, 97, 100, 101, 102, 106, 108, 109, 110, 111, 112, 114
 - benguellensis 94
 - bivittata 110
 - bivittata 100, 101, 109
 - bocagei 96
 - maculata 96
 - bocagii 96
 - cinctiventris 96
 - cinnamomei-ventris 100
 - cinnamomeiventris 100
 - fasciata 109, 110
 - fulvo-vittata 85
 - fulvovittata 85, 88
 - fulvovittatus 88
 - fuscigula 102
 - insignis 91
 - marmorata 90, 91
 - marginata 90
 - taeniolata 90
 - variegata 90
 - microps 111
 - nasuta 95, 106
 - nobrei 89, 90
 - ocellata 108
 - osorioi 86, 87
 - platyceps 109, 110
 - angolensis 109, 110
 - plicifera 90, 91
 - punctulata 106
 - quinquevittata 112
 - seabrai 96, 97
 - steindachneri 114
 - tristis 100, 101
- Rhacophoridae 6, 37, 38, 162
- Rhagerhis acuta 354
- Rhagerhis tritaeniata 356
- Rhamnophis 8, 398, 399
 - aethiopissa 398, 399
 - aethiopissa 399
 - ituriensis 399
- ituriensis 398
- Rhamphiphis 354, 355
 - acutus 354, 355
 - acutus 354, 355
 - jappi 354, 355

togoensis 355
 wittei 354, 355
Rhinotyphlops 292, 293, 295, 296, 297, 298, 299
 angolensis 292
 anomalus 293
 brevis 298
 lineolatus 295
 lineolatus 295
 mucroso 296, 298
 petersii 298
 praeocularis 299
 schlegelii 296, 297, 298
 dinga 296
 mucroso 296
 petersii 297
 schmidti 298
Rhoptropus 6, 30, 31, 41, 45, 46, 47, 199, 200, 201, 202, 203, 204, 205
 afer 199, 201
 benguellensis 201
 barnardi 200, 202, 204
 benguellensis 41, 45, 47, 200, 201, 204
 biporosus 201, 202, 204
 boultoni 30, 31, 200, 201, 202, 203, 204
 benguellensis 31, 200, 201
 boultoni 202
 montanus 203
 braconnieri 199
 bradfieldi 200
 montanus 41, 203, 204
 sp 204
 taeniosictus 41, 200, 204
Riopa 239, 243, 246, 247, 248
 (*Eumecia*) *anchietae* 239
 (*Panaspis*) *cabindae* 247
 anchietae 239
 sundevalii 246
 sundevalii 246
 sundevalli 246

S

Scapateira reticulata 219
Scaphiophis 8, 399, 400
 albopunctatus 399, 400
Scapteira 219, 220
 reticulata 220
 serripes 219
Scelotes 250, 251, 252
 bayonii 252
 bipes 251, 252
 ungolensis 250
Schismaderma 5, 69

carens 69
Schoutedenmella spinalis 119
Schoutedenella 118, 120
 lameerei 118
 xenochira 120
 xenochirus 120
Scincidae 7, 37, 38, 41, 237
Scincodipus conigicus 251
Sclerophrys 5, 28, 31, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78
 buchneri 28, 69, 70, 71
 funera 76
 funerea 70
 garmani 71, 72, 75
 humbensis 72
 gutturialis 72, 73, 78
 humbensis 72
 lemairii 73, 74
 maculata 75, 76
 poweri 72, 74, 75
 pseudogarmani 75
 pusilla 75, 76, 78
 regularis 31, 72, 77, 78
Sepedon 316, 318
 rhombeata 318
Sepsina 7, 41, 46, 250, 251, 252
 (*Dumerilia*) *Bayonii* 251
 angolensis 46, 250
 bayonii 251
 copei 41, 46, 252
 Copei 252
 copii 252
Siaphos dewittei 243
Simocephalus 335, 340
 poensis 340
Simocephalus capensis 335
Sphenorhina elegans 241
Stellio 284, 285, 286
 atricollis 284, 286
 nigricolis 285
 nigricollis 284, 286
Stenhorhynchus natalensis 147
Stenostoma 300, 302, 303
 nigricans 300, 302
 rostratum 303
 scutatum 302, 303
 scutifrons 300, 302, 303
Sternothaerus 164, 165, 166, 167, 168
 Adansoni 167
 derbianus 165, 167
 Derbianus 165
 gabonensis 166, 167

nigricans 164, 166, 167, 168
 sinuatus 167
Stigmochelys 6, 172, 173
 pardalis 172, 173

T

Telescopus 8, 400, 401
 finkeldeyi 400
 semiannulatus 400, 401
 polystictus 400, 401
 semiannulatus 400, 401
Temnorhynchus frontalis 343
Testudinidae 6, 37, 38, 169
Testudo 162, 163, 171, 172, 173
 erosa 171
 galeata 163
 pardalis 172
 pardalis 172
 subrufa 163
 Subrufa 162
 triunguis 173
Tetradactylus 7, 31, 236, 237
 africanus 237
 boulengeri 236
 lundensis 236
 ellenbergeri 31, 236, 237
 boulengeri 236, 237
 ellenbergi 236
 lundensis 31, 236, 237
Tharsops aethiopissa 399
Thelotornis 8, 401, 402, 403
 capensis 401, 402
 oatesi 401, 402
 oatesii 401
 Capensis 401
 Kirtlandi 401, 402
 kirtlandii 401, 402, 403
 capensis 401, 402
 kirtlandii 402
 oatesii 401
Thrasops 8, 403, 404
 flavigularis 403, 404
 jacksoni 404
 jacksonii 404
 jacksoni 404
 Jacksonii 404
Tiliqua affinis 253
Tomopterna 6, 29, 36, 46, 153, 154, 155, 156
 (Tomopterna) cryptotis 153
 (Tomopterna) krugerensis 155
 (Tomopterna) tuberculosa 156
 cryptotis 153, 154, 155

damarensis 36, 46, 154
 delalandii 155
 krugerensis 154, 155
 rugosa 155
 signata 155
 tandyi 154, 155
 tuberculosa 155, 156
Tomorupeltis colobura luluae 205
Tomuropeltis 211
Toxicodryas 8, 405, 406
 blandingii 405, 406
 pulverulenta 405, 406
 pulverulentus 405
Trachylepis 7, 9, 26, 28, 29, 31, 41, 45, 46, 48, 55, 244, 245, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271
 acutilabris 46, 252, 253
 aff. spilogaster 268, 269
 affinis 253, 254
 albopunctata 256
 angolensis 266
 bayonii 48, 256, 257
 bayonii 256
 huilensis 256
 keniensis 256
 Bayonii 256
 binotata 257, 258
 bocagii 28, 258, 259
 cf. albopunctata 255
 cf. albopunctatus 254
 cf. lacertiformis 262
 cf. megalura 264, 265
 cf. spilogaster 268
 chimbana 259, 260
 damarana 260, 261
 Gravenhorstii 256
 hoeschi 46, 261, 262
 ivensii 244, 245
 lacertiformis 46, 260, 262
 laevis 263
 maculilabris 26, 28, 45, 263, 264
 megalura 265
 monardi 9, 31, 41, 46, 55, 256, 265, 266
 occidentalis 266
 pulcherrima 259
 punctulata 46, 267, 268
 quinquetaeniata 259
 spilogaster 268, 269
 striata 270, 271, 272
 sulcata 29, 269, 270
 ansorgii 269, 270

nigra 270
sulcata 270
varia 254, 255, 256, 261, 262, 266
variegata 268
wahlbergi 272
wahlbergii 270, 271, 272
Trichobatrachus 5, 35, 127
 cf. robustus 127
 robustus 127
Trimerorhinus 355, 356
 rhombeatus 355, 356
 tritæniatus 356
Trioceros 7, 45, 284
 oweni 45, 284
Trionychidae 6, 37, 38, 173
Trionyx 6, 24, 173, 174
 triunguis 173, 174
Tropidonotus olivaceus 409
Tropidosaura Dumerilii 216
Tropinodotus fuliginoides 408
Tupinambis albigularis 275
Typhlacontias 7, 29, 41, 46, 272, 273, 274, 275
 bogerti 273
 johnsonii 272
 punctatissimus 41, 272, 273, 274
 bogerti 41, 273, 274
 punctatissimus 272, 273
 rhoani 46
 rohani 29, 46, 274
 rudebecki 41, 274, 275
Typhlopidae 7, 37, 38, 41, 292
Typhlops 292, 293, 294, 295, 296, 297, 298, 299
 (*Onychocephalus*) *Anchietae* 293
 (*Onychocephalus*) *humbo* 297
 (*Ophthalmidion*) *Eschrichtii* 294
 intermedia 294
 lineolata 294
 (*Ophthalmidion*) *Kraussii* 294
 (*Ophthalmidion*) *lineolatus* 294
 anchietae 293
 angolensis 292
 adolphi 292
 angolensis 292
 anomalus 293
 bocagei 294, 295
 boulengeri 295
 boulengeri 295
 Boulengeri 294
 congius 292
 eschrichtii 294
 hottentotus 297
 humbo 297

lineolatus 294, 295
 lineolatus 295
mucruso 296, 297
Petersii 297
praeocularis 299
 lundensis 299
punctatus 292, 294, 295
 intermedia 294
 lineolata 294
 lineolatus 294
 punctatus 292, 295
schlegeli 296
 mucruso 296
schlegelii 296, 297
 mucruso 296, 297
 petersii 297
 schmidti 298, 299
Typhlosaurus 237, 238
 jappi 237
 lineatus 237, 238
 jappi 237

U

Uraeus 368, 369
 anchietae 368
Uriechis 321, 322
 capensis 321, 322
 Guentherii 321
 punctatolineatus 321

V

Varanidae 7, 37, 38, 275
Varanus 7, 30, 31, 46, 47, 51, 53, 275, 276, 277, 278
 (*Empagusa*) *exanthematicus* 275
 angolensis 275
 (*Polydaedalus*) *niloticus* 277
 albigularis 30, 46, 51, 53, 275, 276, 277
 albigularis 275
 angolensis 30, 46, 53, 275, 277
 exanthematicus 275, 277
 albigularis 275
 angolensis 275
 niloticus 47, 277, 278
 niloticus 277
 ocellatus 275
 ornatus 278
Vipera 26, 309, 310, 311, 312, 314
 (*Bitis*) *rhinoceros* 311
 (*Cerastes*) *caudalis* 310
 (*Echidna*) *arietans* 309
 arietans 309

aspis 310
 caudalis 310
 heraldica 26, 312
 ocellata 310, 311
 peringueyi 314
 rhinoceros 311
 Viperidae 7, 37, 38, 41, 308

X

Xenocalamus 8, 28, 45, 359, 360, 361
 bicolor 45, 359
 bicolor 359
 machadoi 45, 359
 pernasutus 359
 mechovii 359
 Mechovii 359, 360
 mechowi 360
 mechowi 360
 mechowii 28, 45, 360, 361
 inornatus 360, 361
 mechowii 360
 Mechowii 360
 Xenopus 5, 59, 60, 61, 62, 63, 64, 65
 (Silurana) epitropicalis 60
 allofraseri 59, 61
 amieti 59, 61
 andrei 59, 61
 boumbaensis 59
 calcaratus 60
 cf. epitropicalis 60
 cf. petersii 62
 epitropicalis 60
 eysoole 59

fraseri 59, 60, 61
 itombwensis 59
 laevis 62, 64, 65
 petersi 62
 petersii 64, 65
 poweri 62, 64, 65
 lenduensis 59
 longipes 59
 mellotropicalis 60
 muelleri 61, 62
 parafraseri 61
 petersii 62, 65
 Petersii 62
 poweri 64, 65
 pygmaeus 59, 61
 ruwenzoriensis 59
 sp 60, 61
 tropicalis 60
 vestitus 59
 victorianus 65
 wittei 59
 Xenurophis caesar 384

Z

Zonurus 227
 angolensis 227
 cordylus 227
 Zygaspis 6, 31, 211, 212
 nigra 211, 212
 quadri-frons 212
 quadrifrons 31, 211, 212, 213
 capensis 211
 quadrifrons 212

CALIFORNIA ACADEMY OF SCIENCES

PROCEEDINGS SERIES

INSTRUCTIONS TO AUTHORS

Authors planning to submit papers for consideration for publication in the Academy's *Proceedings*, *Occasional Papers*, or *Memoir* series must follow the directions given below in preparing their submissions. Under some circumstances, authors may not be able to comply with all the computer-based requirements for submission. Should this be the case, please contact the Editor or Associate Editor for guidance on how best to present the materials.

The Scientific Publications Office of the Academy prepares all materials for publication using state-of-the-art, computer-assisted, page-description-language software. Final copy is sent to the printer for printing. The printer does not modify the files sent for printing. Therefore, it falls to the authors to check carefully page proof when it is returned for approval. Ordinarily, all communication with authors is done via email and galley and page proofs of manuscripts, including figures, are transmitted as attachments to email communications. Again, exceptions to this will be made in the event that an author is unable to communicate in this way.

Authors are expected to provide digital copies of both manuscript text files and images, as well as a paper printout of their manuscript. Please note the following:

TEXT: Text can be in Microsoft Word, as a Word document file, WordPerfect, also as a WP document file, or, best of all, as an "rtf" (rich text format) file, which can be produced by most word processors. Authors who use non-standard fonts must include file copies of those fonts so that their symbols can be reproduced accurately. However, it is strongly recommended that the type style "New Times Roman" be used throughout and that the Symbols and Bookshelf Symbol 1 and 3 fonts be used for such items as σ , φ , μ , etc. Note, words must not be typed in all capital letters either in the text or bibliography; small caps are acceptable.

IMAGES: Images should be in either JPG (JPEG), or TIF (TIFF) format. Resolution for grayscale images should be at least 600 ppi (1200 ppi if possible, especially for photomicrographs), and 300 ppi (600 ppi acceptable) for color. All images should be sized so that none exceeds a maximum print size of 5.5"×7.875" (140 mm × 200 mm).

TABLES: Our processing software allows for direct importation of tables. This reduces the chances for errors being introduced during the preparation of manuscripts for publication. However, in order to use this feature, tables must be prepared in Microsoft Excel or in Microsoft Word using Word's table feature; do not prepare tables using tabs or space bars. Complex tables not prepared as described above will be returned to the author for revision.

DIGITAL FILES: IBM or MAC formatted disks will be accepted subject to the following conditions: (a) floppy disks must not exceed 1.4 mb and (b) zip disks, preferably IBM format, must not exceed 100mb. Authors are encouraged to submit their digital files on CD-ROM (CD-R formatted disks NOT CD-RW) inasmuch as these can be read by nearly all CD-ROM drives.

FILE NAMING PROTOCOLS: To facilitate the handling of digital files submitted by authors, the following file-naming conventions are to be followed: text files should bear the author's last name (in the case of multiple authors, only the first author's name) followed by a space and a date in the format mmyy (e.g., 0603 for June 2003) to yield a file name such as **Gosliner 0603.doc** or **Williams 0603.rtf**. If an author has submitted two or more manuscripts and must distinguish between them, then the naming should include an additional numeral: **Gosliner1 0603.doc** for the first manuscript, **Gosliner2 0603.doc** (or .rtf) for the second. Figures should follow similar conventions, as follows: **Gosliner F1 0603.tif**, **Gosliner F2 0603.tif**, for figures in the first manuscript and, if more than one manuscript, then **Gosliner1 F1 0603.tif** etc. for the figures associated with the first manuscript and **Gosliner2 F1 0603.tif** etc. for those with the second. Following these conventions will insure that figures submitted by one author are always maintained distinct from those submitted by another. Tables submitted as Excel files should follow the same naming conventions except the file type designation will be ".xls": e.g., **Gosliner T1 0603.xls**. Please note that extraneous periods are omitted in file names.

BIBLIOGRAPHY FORMAT: Three bibliographic styles are accommodated in the Academy's scientific publications, one commonly used in scientific journals publishing papers in systematic and evolutionary biology, a second used mainly in the geological literature, and lastly, the format most commonly used in the humanities by historians of science. On request, the author will be sent a style sheet that includes samples of the three formats. Authors are also encouraged to examine a copy of the latest published *Proceedings*. In all instances, however, authors should not abbreviate journal names but spell them out completely. For books, the reference must include the publisher and city of publication. It is recommended that the total number of pages in the book also be given.

SUBSCRIPTIONS/EXCHANGES

The *Proceedings* series of the California Academy of Sciences is available by exchange or subscription. For information on exchanges, please contact the Academy Librarian via regular mail addressed to the Librarian, California Academy of Sciences, 55 Music Concourse Drive, Golden Gate Park, San Francisco, CA 94118 U.S.A. or via email addressed to **rkim@calacademy.org**. Subscription requests, including information on rates, should be addressed to Scientific Publications, California Academy of Sciences, 55 Music Concourse Drive, Golden Gate Park, San Francisco, CA 94118 U.S.A. or via email to the Editors at **aleviton@calacademy.org** or **gwilliams@calacademy.org**

Subscription price for 2018: \$75 (US) includes mailing to U.S. and Canadian addresses and \$85 to all others.

The *Occasional Papers* and *Memoirs* are not available by subscription. Each volume is priced separately. *Occasional Papers*, *Memoirs*, and individual issues of the *Proceedings* are available for purchase through the Academy's Office of Scientific Publications. Visit us on the web at <<http://research.calacademy.org/research/scipubs/>>.

COMMENTS

Address editorial correspondence or requests for pricing information to the Editor, Scientific Publications Office, California Academy of Sciences, 55 Music Concourse Drive, Golden Gate Park, San Francisco, CA 94118 U.S.A. or via email to the Editor, Scientific Publications, at **aleviton@calacademy.org** or **gwilliams@calacademy.org**

Table of Contents

MARIANA P. MARQUES, LUIS M.P. CERÍACO, DAVID C. BLACKBURN, AND AARON M. BAUER: Diversity and Distribution of the Amphibians and Terrestrial Reptiles of Angola . . .	1-480
TAXONOMIC INDEX	481-501